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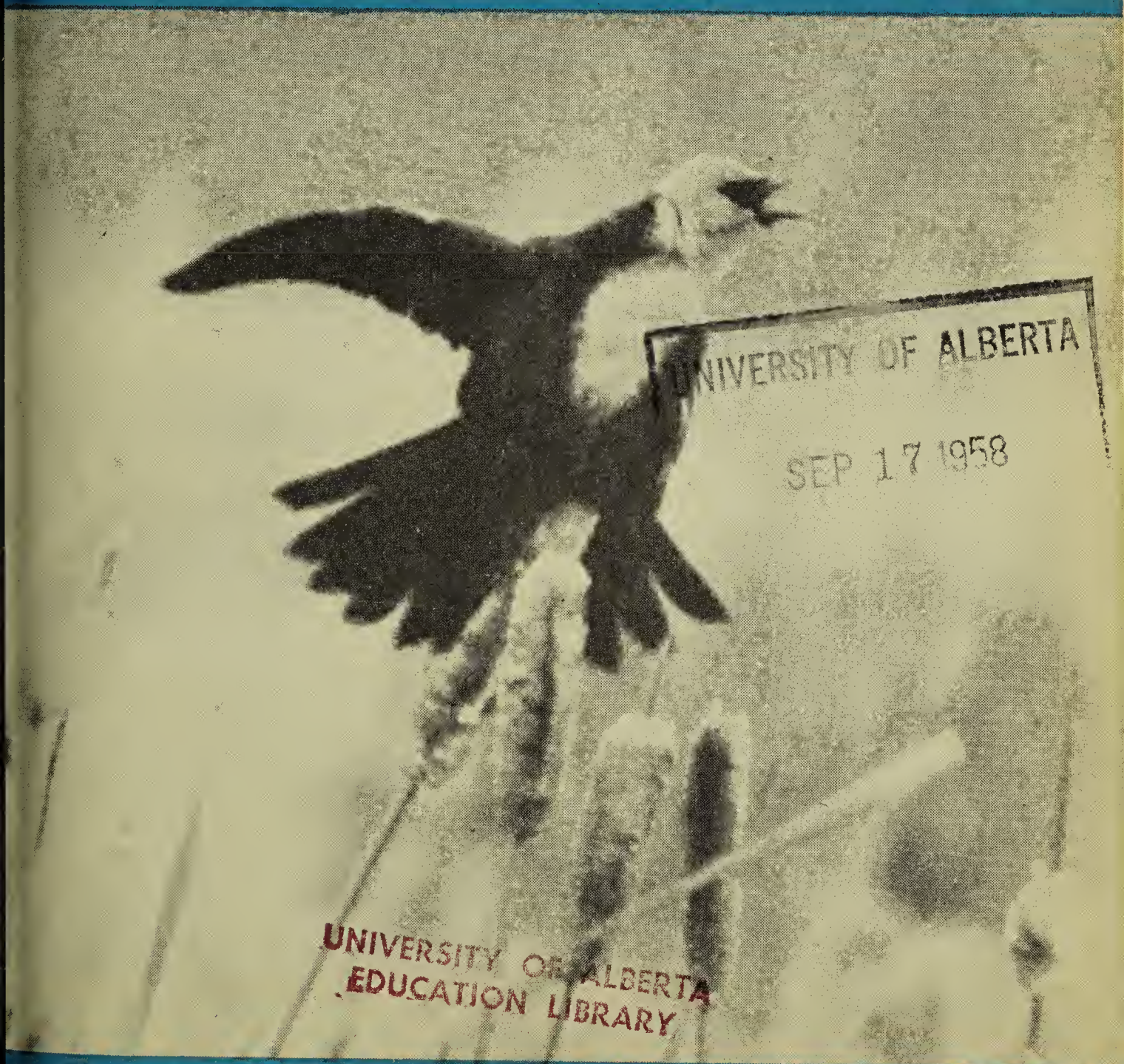
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THE *Blue Jay*

Vol. XVI, No. 3

SEPTEMBER, 1958



Yellow-headed Blackbird

Photo by R. W. Nero

Published quarterly by
THE SASKATCHEWAN NATURAL HISTORY SOCIETY

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BLUE JAY CHATTER

As we work for the protection of the hawks and owls in Saskatchewan it is encouraging to learn that people all over the world are campaigning for birds of prey. Not long ago in the *Observer* (June 8, 1958) we read a letter by Richard Fitter written from Helsinki, Finland, where he was attending the conference of the International Committee for Bird Preservation. One of the chief preoccupations of this international conference was the protection of birds of prey.

A great obstacle to achieving protection of birds of prey, Mr. Fitter pointed out, is the widespread and almost universal conviction that "a bird with a hooked beak must be harmful." Because this is so prevalent an attitude in the Western world, Mr. Fitter was greatly pleased to hear the Indian delegate, Dr. Salim Ali, say that in India, though only vultures are actually protected, there is no problem at all with irresponsible shooting of birds of prey! By contrast, throughout Europe (and in the British Isles as much as anywhere), Mr. Fitter noted, one could almost suppose that men are born with a sort of instinctive revulsion against hooked beaks.

A second great danger to the birds of prey arises from the appearance of a new generation of post-war "sportsmen" who shoot at anything that flies or moves, without bothering to inquire what it is, let alone whether it is protected. Mr. Fitter told how the International Committee for Bird Preservation was trying to meet these twin dangers by urging its member organizations in 45 countries to undertake an educational campaign, particularly by leaflet and film. It was thought that a good film on the birds of prey could do much to help, especially if it were shown widely in rural districts.

We like to think that the film project suggested by the international conference has a kind of counterpart in an educational programme carried on in Alberta by some enthusiastic members of the Edmonton Zoological Society. When Al Oeming, president of the Edmonton society, visited the Regina society last March to tell about his experiences with birds of prey, he mentioned the splendid films and photographs of hawks and owls being prepared and shown to the public by C. G. Hampson and E. T. Jones of Edmonton.

The question of the protection of birds of prey in Saskatchewan will be discussed at our annual meeting in Saskatoon on October 18. We are happy to have as our guest speaker for the meeting, John A. Livingston, Executive Director of the Audubon Society of Canada. Because he is a personal friend of ours and a great friend of the birds of prey, we are looking forward to having Jack Livingston in Saskatoon.

The annual meeting this fall is being planned and organized by the Saskatoon Natural History Society which has already prepared an outline of the programme, printed in this issue of the **Blue Jay**. The executive and members of the provincial society are grateful to the Saskatoon society for undertaking the organization of this meeting. We know from the successful arrangements made by the Prince Albert Society for the summer meeting at Emma Lake how great a contribution a local society can make to the activities of our larger group. All of us who spent a happy weekend at Emma Lake in June join in saying thank you to the hard-working Prince Albert members who made that outing so enjoyable and stimulating.

Another meeting that is in our minds these days is the annual meeting of the American Ornithologists' Union to be held in Regina in 1959. To have the A.O.U. meeting in Regina is at once a great honour and a generous tribute to the Saskatchewan Museum of Natural History and to our society. Dr. W. Nero and his committee are already making plans for the event. We hope to have a really successful meeting with a good representation from Saskatchewan "birders." The field trips and paper sessions will be open to non-members, as well as to A.O.U. members, and we hope that everyone in our society who is interested in birds will come to the meeting to learn more about them and to meet distinguished birdmen from across the continent.

The Blue Jay

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Founded in 1942 by Isabel M. Priestly

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The President's Corner

By **Frank Roy**, President of the Saskatchewan Natural History Society

How soon will the editor of the **Blue Jay** be able to announce the publication of a new work entitled "The Birds of Saskatchewan"? It is 34 years since H. H. Mitchell published his "Catalogue of the Birds of Saskatchewan" in the Canadian Field-Naturalist. Since then we have learned much about the distribution of Saskatchewan birds and have added new species to the provincial list. Since 1924, regional lists have been published for Nipawin by Maurice Street (1942), for Emma Lake by Farley Mowat (1947), for Davidson-Last Mountain Lake by W. E. Clyde Todd (1947), for Yorkton by C. Stuart Houston (1949), for the Cypress Hills and Flotten Lake by W. Earl Godfrey (1950), for Prince Albert National Park by J. Dewey Soper (1952), and for Somme by Ronald and Donald Hooper (1953).

Bird study in Saskatchewan was given a great impetus when Isabel M. Priestly edited the first issue of the **Blue Jay** in the fall of 1942. Mrs. Priestly founded better than she knew. Since that time the **Blue Jay** has become a journal widely respected in ornithological circles. One has but to scan any issue at random to find new sight or specimen records, in addition to articles on distribution and bird behaviour. A check of recent issues of the **Blue Jay** reveals for example, an account of the distribution of the Blue Goose in Saskatchewan; a list of records for the Surf Scoter; an account of the Lazuli Bunting nesting at Moose Jaw; a description of the dry-land nesting of the Western Grebe at Old Wives Lake; a study of the distribution of the European Starling in Western Canada; the first nesting record of the Caspian Tern for Saskatchewan; new provincial records for the Golden-crowned Sparrow, the Black Brant, and the Parula Warbler. What a wealth of information is being accumulated, awaiting sifting and organization for the new "Birds of Saskatchewan."

Public interest in birds has been fostered by the building of the Provincial Museum. Also, in recent years, the staff at the Museum has been augmented, and Mr. Fred Bard and his assistants cover the province, fol-

lowing up reports of new species, collecting, photographing, recording bird songs, studying bird behaviour and contributing articles to **Blue Jay**.

As Stuart Houston pointed out in reviewing the revised edition of the A.O.U. Check-list, the data for Saskatchewan contained therein is neither useful nor reliable, and the fault is largely ours. To help correct this, the Society hopes to publish regional lists from the Qu'Appelle Valley, Carlton, Cumberland, the Coteau region in the elbow of the South Saskatchewan River, Saskatoon, and Regina. But what is needed, above and beyond these regional lists, is a work combining these observations, the Museum records and the observations published in the **Blue Jay** since 1942. The visitor to Saskatchewan has no single volume to which he can turn for information; the Saskatchewan ornithologist would welcome a book that described breeding ranges, migratory movements, and nesting habits. In the new publication, we should attempt to give a complete bibliography of ornithological literature pertaining to this province. There might also be a listing of provincial organizations interested in wildlife and its conservation. Finally, there might well be a place for an ornithological history of the province, written by someone like Stuart Houston who has taken such a great interest in our birds and birdmen, past and present.

In the meantime, all members should continue to send observations to the **Blue Jay**. Official records of new, rare, or difficult-to-identify birds should preferably be supported by a specimen or photograph, but observations by several competent observers will also be given credence. Neither must we neglect day-to-day observations of common birds—spring arrival dates, nesting dates, changes in numbers, fall movements, unusual behaviour—which require hundreds of observers from all over the province, who are able to watch the birds in a given area over a period of years. The making of the "Birds of Saskatchewan" will be an enterprise in which every member of the Saskatchewan Natural History Society can play his part.

BIRD NOTES



Sketch by Dora Bardal

The Chimney Swift

By Frank H. Brazier, Regina

At 7:00 p.m. C.S.T. on May 14, 1958, Elmer Fox and I saw what we believe to be the first Chimney Swift recorded for Regina. It was a bright, warm evening with a light wind, and we spotted the swift as it flew over the trees bordering one of the lawns fronting Wascana Lake in the Legislative Grounds. There were Tree Swallows in the air at the time so that the contrasting flickering flight was most noticeable. Also, we both got our binoculars on it when it returned a second time and saw it clearly enough to identify it as a Chimney Swift (*Chaetura pelagica*). The sickle-shaped wings on the cigar-shaped body were clearly visible to both of us.

The Chimney Swift belongs to the Genus *Chaetura* of the subfamily Chaeturinae (spine-tailed swifts) which, with all other swifts, comprise the Family Apodidae and the Suborder Apodi. The Order Apodiformes includes both swifts and hummingbirds. *C. pelagica* is peculiar to North America, breeding in the for-

ested zone from Carrot River, Saskatchewan, southeastward.

All swifts are extremely specialized birds and as their habits tend towards the spectacular they have aroused considerable interest. They are aerial creatures and some species, *C. pelagica* included, need never touch the ground during a normal lifetime. From the moment a swift launches itself on its first flight from the wall space it clung to after leaving the nest, until its death, it would normally catch flying insects for food, drink, and mate, while on the wing, closing its wings only to roost at night..

The American Chimney Swift gathers dead twigs for nesting material by breaking them from trees with its feet in flight while the European Swift (*Apus apus*) finds its nesting material in windblown flotsam floating in the air. Both these swifts have extremely sticky saliva, as do many swifts, and it is used to cement the nest material to a wall. Indeed, the Salangane (*Collocalia*

esculenta), a swift of southeastern Asia, makes its nest wholly of saliva; this hardened saliva is the basis of Chinese birds'-nest soup. It has been determined beyond reasonable doubt that *A. apus* even passes some nights resting on the wing. This was taken to be another peasant superstition—after all, they also believed that swifts passed the winter, like swallows, buried in the mud of pond and lake bottoms! The latter legend proved false, but when aircraft came on the scene swifts were seen floating on the wing high in the moonlit skies. While most swifts were observed roosting at night, some (they were believed to be the bachelor yearlings) rode the night skies at rest. Lane (1954: 59-61) cites E. Weitnauer in detail on this.

The flickering flight of the swift has been considered due to alternating wing strokes but, and I quote Tyler (1940: 281): "The question was settled by Myron F. Westover (1932) who demonstrated by motion photography that 'there was no instance where there was any alteration of wing movement; the wings move in unison as do those of other species of birds'." The American Museum of Natural History confirmed Mr. Westover's findings. However, Lane (1954: 211) quotes John H. Storer: "I have slow motion movies of (Chimney) Swifts in flight which seem to show quite clearly that they do at times fly with alternate wing beats and can readily change from alternating to simultaneous wing beats." It now seems evident that Westover's films did not allow for the fact that sometimes they fly with alternating wing beats and his film caught only one part of the show. However, I notice that Peterson (1947: 130) still claims that the alternating wing beats are an illusion despite the slow motion movies.

The very name "swift" recognizes its most characteristic feature—its speed in flight. Certainly the swifts rate among the fastest birds. If the Peregrine is handed the palm for speeds well in excess of 200 m.p.h., perhaps up to 265 m.p.h., the swifts as a group are not far behind, if at all. The Indian Spine-tailed Swift (*C. caudacuta*) has been accurately timed at 219 m.p.h., which puts it in the Peregrine class. Pough (1957: 147) credits the White-throated Swift

(*Aëronautes saxatalis*) with being probably the fastest North American bird, noting that they have been seen to escape from stooping Peregrines.

I do not know if there is a study of *C. pelagica* comparable to the one that Lacks (1955) made of *A. apus*. Some of the Lacks findings are most interesting and may apply partly to *C. pelagica*. Tyler (1940: 284) found the weather to be the greatest consistent hazard that *C. Pelagica* faces, prolonged bad weather clearing the air of insects and starving many swifts. The Lacks (1955) noted that during inclement weather the eggs of *A. apus* may be left uncovered for several cold hours without harm; the naked young were also left unprotected from the cold for extended periods, pointing to an evolutionary adaptation for survival. If sufficient food were not found the young died, but they could survive for a day or more without food, a most unusual adaptation in small birds. The Lacks discovered that young swifts store fat against times of food shortage whereas nestlings of other small birds produce feathers rather than fat. Thus an ordinary small bird nestling was ready to fly on schedule if it survived periods of famine, but the young swifts might be delayed three weeks owing to lack of flight feathers although they stayed alive through periods of hunger.

Hummingbirds and the closely related Goatsuckers (*Order Caprimulgiformes*) are well known among scientists for their ability to revert to a "cold-blooded" state, that is, one in which body temperature is lowered without harm. The naked young swifts, the Lacks discovered, also exhibit this reptilian characteristic as they are often left alone when both parents are away during bad weather hunting food. Webb (1953: 193-195) had some important experiences with South American hummingbirds and South African mousebirds (*Fam. Colidae*) which seemed dead when examined on nights of low temperature, but which revived later—the mousebirds when warmed by the sun and the hummingbirds at daybreak regardless of temperature. Pearson (1955: 93-99) has done some fine work on the rate at which the tissues of hummingbirds consume oxygen and has found that the entire body

slowed down overnight practically to the edge of death to keep the birds from starving while they slept. He found, as Webb found, that they reverted to normal at daybreak when the flowers open and their nectar is again available. Some such physiological change would apparently account for the resistance of the young swifts.

The birds of these two orders (swifts, hummingbirds, goatsuckers and mousebirds) are thought to be fairly primitive as birds go, and they do have a tenacity for life which is remarkable. It is thought that birds evolved comparatively recently from lizard-like reptiles: perhaps the evolutionary adaptations from survival mentioned above are actually atavisms or holdovers from reptilian ancestors, as we know that reptiles can

survive low temperatures and famine for long periods. These characteristics add some weight to the belief that these birds are quite primitive.

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Bird Notes from a Farm Shelterbelt

By Margaret Belcher, Regina

Thirty years ago a shelterbelt was planted on our farm at Dilke, with Manitoba maple, ash and Russian poplar spaced four feet apart and bordered with caragana. The ash and poplar have almost all died out, leaving the maples and caraganas. In this shelterbelt in the past thirty years a characteristic birdlife has established itself.

The pattern of birdlife here could be duplicated in practically any shelterbelt in south central Saskatchewan. It is not its novelty that is its attraction—with almost predictable regularity the same birds return each year to build their nests and raise their young. Yet, because the farm shelterbelt is so compact a unit of a particular type of habitat, and because the "edge" of the belt of trees is so well suited to birds and to watching them, the shelterbelt has surprising possibilities for a study of bird behaviour. Even if one is not engaged in a seriously conducted study, it is endlessly interesting to watch the birds each day when working in the garden or going about farm chores in the yard.

This year the shelterbelt has had the following resident birds, presumed nesting: Yellow-shafted Flicker (one pair); Eastern Kingbird (probably two pairs); Western Kingbird (two pairs); Least Flycatcher (one pair); Brown Thrasher (probably two pairs); Robin (one pair); Loggerhead Shrike (one pair); Warbling Vireo (probably two pairs); Yellow Warbler (one or two pairs); House Sparrow; Redwinged Blackbird; Baltimore Oriole (one pair); Common Grackle (two pairs); Brown-headed Cowbird; American Goldfinch; Chipping Sparrow (one pair); Clay-colored Sparrow.

The Yellow-shafted Flicker probably did not nest in the shelterbelt, but in a nearby aspen bluff. The male flicker drummed on the combine in the spring; on July 15 five flickers were observed at one time and following that the young were heard often in the shelterbelt calling for food.

The Chipping Sparrow in the shelterbelt was also something of a surprise. After the spring migration of sparrows, I heard the song only once or twice; the other day (July 15), however, I saw the "Chippie" with

its characteristic red cap. It surprises one to find a Chipping Sparrow nesting so unobtrusively when one knows them as common and very much in evidence on lawns in cities like Saskatoon and Edmonton. The House Wren, on the other hand, is probably not nesting here this year, although it too has been heard on several occasions. Usually a wren nests in the cattle sheds, and when it does its stuttering song can be heard daily in the shelterbelt.

Only one pair of Baltimore Orioles nested in the shelterbelt this year, and only one pair in 1957; we used to have at least two pairs. A female Oriole found dead in the yard on May 31 may have accounted for the failure of a second pair to nest this year. Recently (July 8) a second dead Oriole was discovered, a male bird brought into the barn at noon by a cat. Had it been killed the day before, we should have thought that the absence of the parent bird explained the plaintive turkey-like "peeps" of two young Orioles which called continuously throughout the day of July 7. The young Orioles certainly sounded as if they had been deserted, and no adult birds were in evidence. However, a female was observed feeding two young on July 8, and we recalled then that we had heard the same plaintive peeps last year from young Orioles only just out of the nest. Mrs. Keith Paton, telling of the birds in their shelterbelt at Oxbow, also comments on the "racket" young Orioles make calling to their parents.

Predators in the shelterbelt are rare. Crows do not nest, apparently preferring the bluffs in the fields and pastures. A Magpie attempted to nest this year, but its bulky nest was torn down, and since then it has not even hunted in the shelterbelt as a pair did daily last year.

Why have Redwinged Blackbirds returned to nest in the shelterbelt this year? For years there have been only Brewer's, although I can remember as a child hearing the chorus of Redwings in the trees on early summer mornings. Later, the Redwings must have withdrawn to the more typical habitat of willow-fringed sloughs in the fields. This year they are back. Have they driven away the Brewer's Blackbirds, or simply come in to fill a vacuum left when the

Brewer's, for some reason, stopped nesting here? Some weight is given to the latter explanation by a comment in my 1957 notes that Brewer's Blackbirds "seem not common this year."

We have never systematically hunted the shelterbelt for nests, feeling that unless "birdnesting" is engaged in for some scientific purpose breeding birds should be disturbed as little as possible. There are other ways, of course, of recognizing the presence of breeding birds. The day we planted potatoes this spring we watched a pair of Grackles carrying nesting materials from the edge of a nearby slough. The female brought slough grass in her beak on each trip and the male followed her to the slough and back without seeming to bring any nesting material. We later wondered whether the male carried mud unnoticed in his beak. Another curious thing that we have noticed about the Grackles is the fact that the two pairs are almost always flying about together, although the nests are in quite different parts of the shelterbelt.

Seasonal singing, of course, also indicates the presence of breeding birds. We suppose, for example, that two pairs of Warbling Vireos have nested this year because we have heard two Vireos singing all summer.

When the young birds begin to appear in the last weeks of June we have the final evidence of successful nesting. On June 28, young Grackles and Shrikes appeared, with all the fuss attending their first venture into the world. Young Orioles and Thrashers were seen July 7, young Western Kingbirds July 17. On July 12 the alarm calls of male and female Redwings drew my attention to young blackbirds in the chokecherries. Not less than four adult males had assembled to join in the warning cries. These must have been birds of rather late hatch, for the first group of flocking Redwings was seen in the yard only four days later.

The most interesting nest record for the year was that of a House Sparrow with an apartment in a Western Kingbird's home. One pair of Western Kingbirds had a bulky nest at least four times the size of the other pair's nest, and we realized that

they had tenants when we saw a male House Sparrow flying into the tree with food.

A farm shelterbelt would lend itself well to the study and recording of bird song. In addition to the easily recognized "songs" of the familiar species of birds, there are a great variety of notes, varying with the season and the purpose of the call. The spring "okalee" of the Redwing is rarely heard now, whereas the harsh "chee" is given repeatedly throughout the day—to use just one example. The Brown Thrasher is another bird with many notes besides the repeated phrases described in field guides and reminding one of Browning's thrush that "sings each song twice over."

We are always interested in the Thrasher's second round of song, lasting for a week or ten days later in the season. He began his second period of animated singing this year on June 28 and continued to July 7; last year we heard it also in the last week in June. Other birds seem to do the same thing. After a period of little song, the Robin was noticed singing spiritedly on July 8 and he continued to sing for almost a week. On July 9 I heard the first Yellow Warbler's song that I had noticed for some time and it has been heard for several days. By contrast, the Warbling Vireo never stops singing. It is the most constant singer in the shelterbelt, persisting in song throughout the day and throughout the season. I wish I had kept records of its song this year; I cannot remember a day since the arrival of the first Vireo this spring when I have not heard the song. It is so free a singer that the male was noticed to continue its warbling song as it flew in pursuit of the female shortly after their arrival in May.

Our shelterbelt has no winter residents, only occasional winter visitors — Black-capped Chickadee, Downy and Hairy Woodpeckers, Northern Shrike and Pine Grosbeak. Sometimes in severe winters Gray Partridge and Sharp-tailed Grouse shelter there and come to the oat stacks for feed. A Great Horned Owl which breeds elsewhere on the farm) is occasionally seen sniping from the tallest trees, and in December, 1956, during what my brother called the "Killer Blizzard" a Golden

Eagle unexpectedly sheltered there. The most interesting winter visitor was a tiny Boreal Owl (Jan. 2, 1956).

In spring and fall there are migrant thrushes (Swainson's, Gray-cheeked), migrant sparrows (Slate-colored Junco, Tree, Chipping, Harris', White-crowned, White-throated, Lincoln's) and migrant warblers (chiefly Tennessee, Orange-crowned, Myrtle, Blackpoll, Palm). Less commonly we see the American Redstart, and we have one record of the Bay-breasted (May 22, 1954) and one of a Mourning Warbler caught by a cat (Sept. 1, 1952); other warblers passing through are missed by not being seen or correctly identified. Of the Kinglets, only the Ruby-crowned has been seen. Pine Siskins are noted as migrants and also as erratic summer visitants.

As summer visitants there come to the shelterbelt Cedar Waxwings, Rose-breasted Grosbeaks (one seen July 30, 1952), and Black-billed Cuckoos. Summer visitants to farm shelterbelts may sometimes provide a real thrill. George Ledingham tells of a **SCARLET TANAGER** seen at the farm six miles west of Moose Jaw, May 19, 1951, and of a **MOCKINGBIRD** seen there this year (July 16, 1958). Mrs. Keith Paton, Oxbow, has reported to the **Blue Jay** a **MOCKINGBIRD** found dead last summer in the Patons' shelterbelt. Mrs. Paton described it as a greyish bird answering to the description of a Mockingbird in her field guide. She wonders whether a Mockingbird might have nested there recently. "Several years ago," she says, "I found an untidy large nest containing several bluish eggs, in a low bush. At the time, I thought the bird nearby was a Mockingbird but not being so 'bird-minded' then as now, I did not bother to get positive proof."

Mrs. Paton went on in her letter to tell about the birdlife in her shelterbelt: this summer they have Catbirds, Brown Thrashers, Eastern Kingbirds, Western Kingbirds (three pairs), Brewer's Blackbirds (which have lost two nests because of Grackles), Wrens, Goldfinches, Yellow Warblers, Baltimore Orioles, Robins (now nesting a second time), Least Flycatchers, and a Black-billed Cuckoo "here as usual, although we've never found a nest." Mrs. Paton's observations and my own illustrate the kind of obser-

vation that any interested person can make of the birds in a farm shelter-belt. Much more could be done by someone making an intensive life history or behaviour study. The unit of study is so restricted that it may seem entirely insignificant; but it is to be remembered that observations in a limited local area produced Malcolm MacDonald's *Birds of Brewery Creek* and Gilbert White's *Natural History of Selborne*.

NEST RECORD CARDS

Please send your nest records in immediately so that a summary of this year's information may be prepared for the December issue of the **Blue Jay**. Cards should be sent to the Saskatchewan Museum of Natural History, Regina.

PROTECTIVE COLORATION OF THE WESTERN MEADOWLARK

By Ono F. Lick, Davidson, Sask.

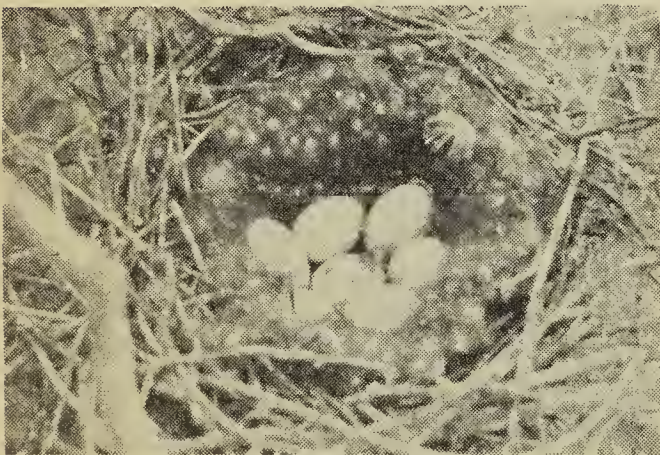
Yesterday, as I sat facing an old window overlooking a shaggy piece of sod, I saw a bird flying downward as if going to alight. By its size, its streaked brownish back and white outer tail feathers, I took it to be a meadowlark. My mind became conscious of cats, so I looked more closely, ready to alert the bird by tapping on the window pane. The sod (I cannot give it the dignified name of lawn) looked very rumpled and tousled, with clumps of old, brown crested wheat grass, fresh green grass underneath and a big patch of prairie beans. I could see no meadowlark. The breeze kept the yellow blossoms of the beans moving. The

longer I watched, the more determined I became to spot the yellow-breasted bird. After watching for five minutes, I became bolder and pulled the window curtain aside. Only then did the bird display itself by flying up. It was an example of remarkable protective coloring, the brown of the bird resembling the tufts of dead crested wheat grass and the yellow blossoms of the beans.

I have observed this protective coloring on many occasions. A few years ago I was watching a swarm of fritillary butterflies amid a patch of dandelions. Walking around among the nodding dandelion heads, scarcely noticeable, was a meadowlark, grabbing off the fritillaries.

MALLARD NESTS IN ABANDONED CROW'S NEST IN ASPEN TREE

By Frank Roy, Saskatoon



On June 8, 1958, Mr. Bob Darcy, 1340 Colony Street, Saskatoon, reported to me that he had discovered a duck nesting in an abandoned crow's nest in an aspen tree about two miles east of the city on Eighth Street. The crow's nest, situated about 16 feet up in a 24-foot aspen,

was well preserved and amply lined with down. When I observed the nest on June 8, it contained 7 eggs. Yolks on several of the eggs indicated that there had been at least one more egg in the original clutch.

The female Mallard flew off when we approached the edge of the aspen grove. Three days later, June 11, she refused to leave the nest until we shook the tree. In each instance she disappeared through the dense foliage and flew at ground-level until she was well out of sight. We did not see her return to the nest and wondered whether she landed directly on the nest from above, or whether she landed at the base of the tree and then flew up to the nest edge. Has anyone ever watched a tree-nesting Mallard return to her nest? It would be an interesting observation.

Co-operative Spring Migration Study

1958

Compiled by Mary Houston, Yorkton.

	DILKE J. B. Belcher	DUVAL Geo. Herber	FORT SAN Manley Callin	GRENFELL Mrs. J. Hubbard	HIGH HILL Anton & Steve Waychesen	KINDERSLEY Glen A. Fox	KINLOCK Mrs. H. Rodenberg	NIPAWIN Street & Matthews	NAICAM W. Yanchinski
Whistling Swan	Ap 6	Ap20	Ap19		My 7	Ap26		Ap13	
Canada Goose	Ap 8	Mr30	Mr31		Ap 1	Mr31	Ap 8	Ap 5	Ap 9
Gallard	Ap 4	Mr31	Ap 4	Mr31	Ap 4	Ap 1	Ap21	Ap 4	Ap 6
Quintail	Mr31	Ap 1	Ap 1	Ap 1	Ap 7	Ap 1	Ap11	Ap 4	Ap 5
Marsh Hawk	Mr30	Ap 1	Mr28	Mr30	Ap 9	Mr31	Ap10	Mr30	Mr29
Willdeer	Mr30	Ap 2	Mr23	Ap 1	Ap 4	Ap 2	Ap 2	Ap 7	Ap 7
Common Snipe		Ap28	Ap27		Ap11	Ap19	Ap25	Ap26	
Mourning Dove	My12	Ap30	Ap21	My14	My 5	My16	My 8	My 4	My13
Common Nighthawk	My28		My25		My24	Jn 2	My10	My25	
Ruby-throated Hummingbird ..			My19				My15	Jn 9	
Yellow-Shafted Flicker	Ap18	Ap16	Ap13	Ap13	Ap15	Ap26	Ap24	Ap 9	Ap22
Eastern Kingbird	My13	My18	My11	My13	My15	My17		My19	My18
Eastern Phoebe			Ap27	My25	Ap20	My 4	Ap29	Ap17	Ap24
Barn Swallow	My 4	My 6	My 2	Ap26	My 8	My18	My 8	My 6	My 6
Purple Martin		My12	Ap27	My 1	My13	Ap25	Ap28	Jn 3	My 4
Common Crow	Mr28	Mr29	Mr25	Mr27	Mr28	Mr31	Mr27	Mr26	Mr28
House Wren	My21	My15	My 5	My14	My15	Jn 9	My11	My11	My16
Chatbird	My22	Ap 7	My20	My23	My27	Jn 2		My28	My25
Brown Thrasher	My15		My10	My20		My19			
Red-eyed Vireo			My25			My23		My26	My15
Yellow Warbler	My20	My23	My10	My13	My23	My10	My18	My12	My17
Myrtle Warbler			My 2	My25	Ap22	My 4	My14	Ap30	
Redwinged Blackbird	Ap 6	Mr28	Ap 3	Ap 2	Mr30	Ap 2	Ap 8	Ap 6	Ap 6
Baltimore Oriole	My19	My24	My15	My19	My29	My25	My18	My23	My23
Rose-breasted Grosbeak			My25		My23		Ap26		
American Goldfinch	My21	My28	My22	My22	My23	My 4	My21	My25	My24
Blue-colored Junco	Mr27	Mr26	Mr27	Mr30	Mr27	Ap 4	Mr27	Mr30	Mr31
Chipping Sparrow	My18	Ap 2	My 5	My 5		My10	Ap25	Ap18	My18
White-crowned Sparrow				My 9		My 4	Ap30	My 9	My 9
White-throated Sparrow	My25	Ap24	My 6	My 6	My 6	My 3	Ap30	My 5	My10

Co-operative Spirit

Compiled by Mary Houston, Yorkton.

	PRINCE ALBERT Brooman & Capusten	PRINCE ALBERT Don Karasiuk	REGINA Frank Brazier	REGINA Dr. G. F. Ledingham	REGINA F. W. Lahrman & Museum Staff	SALTCOATS Billy Horseman	SASKATOON Dr. R. M. Bremner	SHEHO Wm. Niven	SPIRIT LAKE
Whistling Swan	My 2		Mr29	Mr29	Mr29	Ap15	Ap12	Ap20	
Canada Goose				Ap 6	Mr30	Mr31	Ap12	Mr31	Ap
Mallard	Ap 4	Ap10	Mr27	Mr28	Mr26	Mr29	Ap 5	Ap 2	M
Pintail		Ap10	Mr28	Mr25	Mr25	Mr30	Ap 6	Ap 3	M
Marsh Hawk	Ap20	Ap 7	Ap 4	Ap 6	Mr29	Mr23	Ap 3	Mr25	M
Killdeer	Mr26	Mr29	Mr30	Ap 1	Mr30	Ap 1	Ap 8	Mr31	M
Common Snipe			Ap19	Ap25	Ap11	Ap13	Ap27		Ap
Mourning Dove		My 7	Ap30	Ap21	Ap13	Ap27	My4	My 2	M
Common Nighthawk	My25	My24	My20	My15	My25	My18	My21	My23	M
Ruby-throated Hummingbird ..	My26	My28				Jn10			
Yellow-Shafted Flicker	Ap26	Ap25	Ap15	Ap10	Ap10	Ap10	Ap13	Ap 8	Ap
Eastern Kingbird	My25	My25	My15	My11	My12	My14	My23	My15	M
Eastern Phoebe	My24	My21		Ap21		Ap29		Ap16	Ap
Barn Swallow		My22	Ap27	My10	Ap12	My 4	My25	My 7	M
Purple Martin	My20	My27	My17	My 2	Ap29	Ap25			M
Common Crow	Mr30	Fb23	Mr29	Mr29	Mr23	Mr21	Mr30	Mr28	M
House Wren	My22	My15	My11	My15	My18	My12	My 7	My13	M
Catbird	My25	My25	My24	My22	My23	My23	My25	My22	M
Brown Thrasher		My21	My18	My 9	My16	My12	My14	My13	M
Red-eyed Vireo	My25		My24	My24	My19			My14	M
Yellow Warbler	My21		My 8	My 9	My 6	My10	My13	My13	M
Myrtle Warbler			Ap10	Ap19	My 2	Ap26		Ap29	Ap
Redwinged Blackbird	Ap 4	My20	Mr30	Ap 1	Mr30	Mr26	Ap 6	Mr31	Ap
Baltimore Oriole	My25	My24	My15	My15	My14	My17	My18	My16	M
Rose-breasted Grosbeak	My25	My25	My24	My16	My19				My
American Goldfinch		Jn12	My11	My24	My17	My20	My24	My21	M
Slate-colored Junco		Mr29	Mr26	Mr27	Mr26	Mr26	Mr30	Mr28	Mr
Chipping Sparrow		My 1	My 2	My 3	My 9	Ap20	My 6	My 2	M
White-crowned Sparrow		My 8	My 2	My 2	My 2	Ap29			My
White-throated Sparrow	My23	My 4	My 2	My 2	My 3	Ap27	My 4	My 2	My

Migration Study 1958

	SPIRIT LAKE Joyce Gunn	TONKIN Pearce Bros.	TULLIS Mrs. E. C. Boon	WALLWORT J. Turnquist	WYNYARD D. Bardal	YORKTON Dr. Stuart Houston	ERSKINE, ALTA. Lloyd M. Lohr	MASEFIELD J. D. Chandler
Whistling Swan	My 3		Ap19			Ap20	Ap15	
Canada Goose	Ap11	Ap 8	Ap11		Mr27		Ap 6	Mr30
Mallard	Ap 7	Mr31	Ap 6		Mr27	Ap 4	Ap 4	Ap 3
Pintail	Mr31	Ap 7	Mr29		Ap 3	Ap 4	Ap 5	Mr26
Marsh Hawk	Mr30	Ap 7	Ap13		Ap12	Ap 6	Ap 13	Mr20
Killdeer	Ap 1	Mr31	Ap 4		Ap 7	Mr31		Mr30
Common Snipe	Ap12	Ap26				Ap20		
Mourning Dove	Ap23	My10		My11	My 3	My11	Jn 3	My 5
Common Nighthawk	My23	My23			My 3			
Ruby-throated Hummingbird ..	My26	My21		My20	My31	My25		
Yellow-Shafted Flicker	Ap16	Ap 8			Ap18	Ap20	Ap20	
Eastern Kingbird	My13	My14	My22	My20	My19	My18	My13	My18
Eastern Phoebe	Ap10			My 9		My18	My13	Ap27
Barn Swallow	My 5	Ap27	My12	My12	My24	My4	My 9	My 5
Purple Martin	My13			My10		My 2	Ap18	
Common Crow	Mr27		Mr29		Mr27	Mr26	Mr28	Mr22
House Wren	My 9	My10		My23	My14	My13	My14	
Catbird	My18	My 8	Jn 1		My25	My25		
Brown Thrasher	My15				My21	My25	Jn 2	
Red-eyed Vireo								
Yellow Warbler	My14	My16			My21	My13	My10	
Myrtle Warbler	Ap28					My11		
Redwinged Blackbird	Mr31	Ap 7	My12		Ap20	Ap 4	Ap 6	Ap 6
Baltimore Oriole	My15	My15			My17	My18	My13	My26
Rose-breasted Grosbeak		My25				My18		
American Goldfinch	Jn 2				My30	My25	My26	
Slate-colored Junco	Mr26	Ap 3	Ap 6		Mr26	Ap 4	Ap 7	
Chipping Sparrow	Ap29				My18			
White-crowned Sparrow			My 4		My 7	My10	Jn 8	
White-throated Sparrow	My 4				My 7	My 2		

Second Annual May Day Count Saskatoon Natural History Society May 25, 1958

This year 14 observers in four groups covered the same area that was done last May and on previous Christmas Bird Counts. After 11 o'clock a strong wind somewhat spoiled the day, making it impossible to distinguish sounds. Total party hours afield, 28; total miles covered, approximately 85. The total species for this year was 88 comparing to 104 last year when the count was made one day later.

The two most interesting records were of the Mockingbird sighted by Dr. Gerrard, and the Lark sparrow discovered by Jim Hogg, Helen Mann and John Shadick. These records will be dealt with more fully in a special note (which see).

The list of birds seen follows. Last year's totals are given in brackets.

Horned Grebe, 12 (26); Western Grebe, 1 (4); Mallard, 130 (120); Gadwall, 8 (2); American Widgeon, 50 (55); Pintail, 73 (61); Shoveler, 33 (58); Green-winged Teal, 6 (3); Blue-winged Teal, 85 (97); Canvasback, 23 (6); Lesser Scaup, 32 (79); Ruddy Duck, 1 (0); Red-tailed Hawk, 7 (4); Ferruginous Hawk (Hogg), 1 (0); Marsh Hawk, 11 (6); Pigeon Hawk, 1 (0); Sparrow Hawk, 2 (1); Gray Partridge, 4 (2); Sora, 5 (2); Coot, 32 (24); Killdeer, 54 (25); Black-bellied Plover, 7 (31); Willet, 12 (2); Spotted Sandpiper, 2 (12); Pectoral Sandpiper, 22 (14); White-rumped Sandpiper, 17 (25); Baird's Sandpiper, 20 (12); Least Sandpiper, 8 (24); Stilt Sandpiper, 51 (0); Semipalmated Sandpiper, 86 (0); Marbled Godwit, 12 (3); Avocet, 6 (0); Wilson's Phalarope, 39 (25); California Gull, 3 (2); Ring-billed Gull, 43 (1); Franklin's Gull, 332 (2); Common Tern (Roy), 1 (4); Black Tern, 126 (98); Mourning Dove, 25 (30); Belted Kingfisher, 1 (2); Flicker, 15 (11); Hairy Woodpecker, 1 (5); Eastern Kingbird, 39 (30); Least Flycatcher, 82 (12); Horned Lark, 6 (5); Tree Swallow, 51 (27); Barn Swallow, 53 (15); Cliff Swallow, 10 (12); Magpie, 48 (18); Crow, 123 (57); Black-capped Chickadee, 6 (1); House Wren, 44 (16); Mockingbird (Gerrard), 1 (0); Catbird, 9 (1); Brown Thrasher, 17 (18); Robin, 95 (72); Swainson's Thrush, 2 (7); Gray-cheeked Thrush (Jonathan Gerrard), 2 (1); Mountain Bluebird, 14 (4); Loggerhead Shrike, 4 (4); Starling, 27 (15); Red-eyed Vireo, 5 (7); Warbling Vireo, 7 (2); Tennessee Warbler, 1 (3); Yellow Warbler, 170 (51); Myrtle Warbler, 1 (1); Yellowthroat (Jonathan Gerrard), 1 (0); House Sparrow, 310 (530); Meadowlark, 51 (68); Yellow-headed Blackbird, 47 (15); Redwinged Blackbird, 113 (120); Brewer's Blackbird, 40 (60); Baltimore Oriole, 37 (10); Bronzed Grackle, 22 (25); Cowbird, 67 (77); Goldfinch, 36 (5); Rufous-sided Towhee, 7 (10); Savannah Sparrow, 15 (10); Baird's Sparrow (Hogg), 4 (0); Vesper Sparrow, 70 (75); Lark Sparrow (Hogg, Mann, Shadick), 6 (0); Chipping Sparrow, 18 (19); Clay-colored Sparrow, 170 (131); Harris' Sparrow, 1 (0); White-crowned Sparrow,

1 (0); White-throated Sparrow, 1 (0); Lincoln's Sparrow (Hogg—a doubt expressed here), 2 (0); Song Sparrow, 19 (31).

Total individuals, 3,255 (2,701). Species 88 (104).

Rather surprising omissions from this year's list that one would normally expect in the region on May 25 include the following: Pied-billed Grebe, American Bittern, Sharp-tailed Grouse, Ring-necked Pheasant, Lesser Yellowlegs, Nighthawk, Downy Woodpecker, Phoebe, Say's Phoebe, Bank Swallow, Veery, Cedar Waxwing, Rose-breasted Grosbeak.

OBSERVERS: Bob Pravda, R. Gerrard, Ron Bremner, Bob Folker, Dr. J. Gerrard, Mrs. Gerrard, Jonathan Gerrard, Harvey Beck, Resi Wakonig, Jim Hogg, Mrs. Hogg, John Shadick, Helen Mann, Frank Roy (recorder).

Lark Sparrows at Saskatoon — Northerly Record for Province?

In the course of the May 25 Bird count organized by the Saskatoon Natural History Society, Jim and Grace Hogg, Helen Mann and John Shadick discovered a small colony of Lark Sparrows in the vicinity of the Haultain elevator about ten miles south-east of Saskatoon. The region is sandy, much of it in pasture, and aspen groves dot the landscape. Since the birds were first observed, several members of the Natural History Society have been out to see them. The maximum number seen at any one time has been 6. Dr. Bremner and I noted a pair mating on the evening of June 11, but as yet we have not located a nest. All birds have been seen within a quarter of a mile of the elevator. Is this a northerly record for the province of Saskatchewan?—Frank Roy, Saskatoon.

Mockingbird at Saskatoon

On May 25 the Gerrards spotted what they believe was a Mockingbird at the top of a tall tree along the river bank just north of the Nineteenth Street Bridge. They had a good view of the bird which was about 5 yards distant. They did not hear it sing, nor did they see it when it flew from the top of the tree. Dr. Gerrard is familiar with the bird in Eastern United States and in its winter quarters on the island of Jamaica. The principal distinguishing marks were its grey coloration and its bill. When they first noted its outline against the sky they had expected it to be a Thrasher.—Frank Roy, Saskatoon.

Some Unusual Sask. Bird Records

By **Fred W. Lahrman**, Saskatchewan Museum of Natural History

The dry weather of this past spring has caused the rapid drying up of the flooded fields and sloughs near the city of Regina, causing large areas of mud flats to be exposed. This provides ideal feeding and resting conditions for shore birds which appeared in unusually large numbers during the spring migration period. Among these were the Dunlin (*Erolia alpina*) and the Buff-breasted Sandpiper (*Tryngites subruficollis*) which are rarely seen in this area.

On May 6, 1958, two Dunlins were observed by Dr. R. W. Nero and myself, one of which was collected. Two were again observed by Dr. G. F. Ledingham on May 10, and three on May 18 by F. H. Brazier.

The Museum has one other Dunlin specimen, a female, taken June 8, 1914, at Churchill River by A. Buchanan. Other Museum records include a specimen taken August 9, 1920, Lake Athabasca, U.S. Biological Survey party; three males seen May 23, 1931, Round Lake, Broadview, F. G. Bard; reported seen 1932, Wascana Lake, Regina, F. Bradshaw.

On May 28 twenty Buff-breasted Sandpipers were observed by Dr. R. W. Nero and F. H. Brazier, and on May 29 Dr. Nero and I saw 94, three of which were collected. On May 31, four were seen. Other Museum records are: one male collected, August 26, 1921, Old Wives Lake, H. H. Mitchell; two males collected, August 27, 1921, Old Wives Lake, H. H. Mitchell; three taken at Old Wives Lake, May 23, 1922, by C. G. Harold; one female

taken May 29, 1930, Unity, by R. D. Symons; 19 collected, May 23, 1932, Imperial Beach, Last Mountain Lake, George M. Sutton; one reported to F. G. Bard June 2, 1937, caught by a dog. Identified as a Buff-breasted and made into a study skin.

Two other observations are of interest. A Snow Bunting (*Plectrophenax nivalis*) was observed June 15 on the shore of a large marsh approximately 12 miles east of Simpson. Although it was easily recognized as a Snow Bunting, it was strangely different in appearance, being much darker on the head and back than any I have ever seen. I presume that it was a female since it was so dark, and that this is how they appear when they arrive on their breeding grounds, where this one certainly should have been at this date.

The other unusual bird was a Black Duck (*Anas rubripes*) seen June 16 in the Regina Waterfowl Park. This is the first one I have observed on the Wascana Marsh. Other Museum records are: a specimen taken Oct. 25, 1917, Last Mountain Lake, R. Lloyd, Davidson; a specimen taken in the fall of 1918, Last Mountain Lake; one taken, Nov. 20, 1923, J. A. M. Patrick, Yorkton; one seen Oct. 5, 1932, Regina, F. G. Bard; a pair seen May 4, 1935, south of Lumsden, F. G. Bard; a male taken, Oct. 24, 1935, Cymric, K. Ross of Regina; a male taken, Oct. 28, 1936, Penzance, M. F. Parrott, Regina; 4 observed summer, 1957, Old Wives Lake (F.W.L.).

The Black Duck in Saskatchewan

By **Lucy H. Murray**, Regina

The report of a Black Duck on the Wascana Marsh (June 16, 1958) after an absence of twenty years or more is interesting. It has appeared in Saskatchewan in the past at intervals of about twenty years (1917-18; 1932-36; 1958). Only two regions have been favoured, Last Mountain Lake (into which the Wascana drains) and Yorkton. The one record from Yorkton (1923) is strengthened by a second report in 1945 that four black

ducks were banded there by J. H. Wilson (C. S. Houston, *Canadian Field Naturalist*, Vol. 63, No. 6). Are these sporadic appearances in limited areas true of its appearance in other regions, such as Minnesota and Manitoba?

The Black Duck has over the last forty years gradually extended its range from eastern North America westward, in Canada, over Ontario and Manitoba, and is now straying

into Saskatchewan (F. A. Urquhart, 1957, *Some Faunal Changes in Ontario*, p. 29). It remains, however, essentially an eastern duck, appearing in great numbers in the Maritimes and in the New England States. From 1952-56, counts made of it on its wintering grounds (roughly south of the St. Lawrence—Great Lakes waterway and east of the Mississippi) showed the average yearly population to be approximately 678,000, three-fifths of which were concentrated in the Atlantic coastal states. Even though it has extended its range westward, it breeds in great numbers only east of 85° longitude. (R. E. Stewart, 1958, *Distribution of the Black Duck*, pp. 4-5).

In Minnesota, Roberts observed that while it was considered only a straggler from 1896-1910, in 1936 it was to be seen in flocks of twenty to thirty. Nesting records from 1922-29 showed that it was breeding in the northern part of the state, from Lake Superior to the country between Rainy River and Red Lake. One record even showed it nesting as far west as Twin Lakes and as far south as Leech Lake.

A similar trend was evident in Manitoba. In 1904 George Atkinson, (Macoun's colleague in Portage la Prairie), from the five specimens of Black Duck which were taken on the marshes south of Lake Manitoba and sent to him and from the many sight records of it there, believed that it was established in Manitoba (B. J. Hales, 1927, *Prairie Birds*). In 1909 Macoun stated that he had never seen it west of the Red River and in 1927 B. J. Hales reported that in his fifteen years of frequenting the marshes south of Lake Manitoba he had never seen a single specimen. He had to add, however, that one had been sent to him from Oak Lake in 1921. By 1937 Taverner, judging by the numerous records of this duck in Manitoba, concluded that it seemed to be increasing in numbers. During 1946-50 in a count of "the Delta bag," taken by hunters annually, the Black Duck was listed in the group of species which formed 1% of the total shot (L. K. Sowls, 1955, *Prairie Ducks*, p. 160). In 1955 H. A. Hochbaum writing of the feeding of the Mallards upon the stubble on Delta Marsh added that a small number of

Black Ducks mixed with the Mallard followed a schedule similar to that of the Mallards (*Travels and Tradition of Waterfowl*, p. 75).

The reports of the Black Duck's erratic wanderings also show a general movement of it westward. L. L. Snyder, in *Arctic Birds of Canada* (1957) observed that it was a stray in 1933 on Cape Dorset, Baffin Island; in 1937, on Beverley Lake; in 1950, on Chesterfield Inlet; and in 1958, on False River, Ungava Bay. Mowat and Lawrie in 1947-9 found it on the north-west end of Nueltin Lake, Keewatin, and one hundred miles farther north on Angikuni Lake. From its absence in the two hundred miles of timberland south of Nueltin Lake to Brochet, on Reindeer Lake, they decided that the individuals seen must have come from the south-east—the southern shores of the Hudson Bay where Manning, in 1948, had found them in numbers and even to be breeding. (*Canadian Field Naturalist* Vol. 69, No. 3; *National Museum Bulletin*, No. 128). Another curious negative report was that of Godfrey who working in the south-east corner of Manitoba in 1951 found the Black Duck only at Seven Sisters Falls, near Lac du Bonnet. This was in spite of the fact that it was then established on Delta Marsh further west.

For some time studies have been carried out to explain the sporadic and erratic appearance of birds in certain areas. Some ducks have been found to be naturally pioneers. One western duck, the Gadwall, has been reported on the Atlantic coast. An eastern example, of course, would be the Black Duck now straying into Saskatchewan. The return of birds year after year to certain areas is based on tradition (H. A. Hochbaum, 1955 *Travels and Traditions of Waterfowl* Pt. III). Once this tradition is broken the species disappears from that area. Some of the causes of this may be the disappearance of marshland through drought, or artificial drainage, and the overshooting of the local birds. When the ranges of two birds overlap, as has happened to the Mallard and Black Duck in the central part of North America, one species generally thrives more than the other. (P. L. Errington, 1957, *Of Mergansers and Marshes*, p. 22).

Whatever may have been the rea-

sons for the erratic appearances of the Black Duck in Saskatchewan in the past, naturalists will welcome a chance to follow any new reports hoping now, in the light of recent research, to be able to discover some of the causes. Our hunters will welcome reports of the Black Duck's return for it is considered, by some, to be the "wildest," the most sagacious and wary of ducks. Our bird watchers,

anxious to add this eastern bird to their lists, will eagerly scan each flock of Mallards hoping to see some Black Ducks. Such identifications should not be difficult. It is a large brown duck, appearing black at a distance, and easily distinguished from our other sooty-coloured ducks, the Scoters, by its light streaked neck and head, its mallard bill, and the silvery white lining of its wings.

American Avocets Nesting at Oak Lake, Manitoba

By David Hatch, Oak Lake, Man.

EDITOR'S NOTE: David Hatch, at sixteen years of age, is an ardent bird watcher, and we welcome his contribution to the regular columns of the *Blue Jay*. Another young contributor who is a very keen birdman is Bill Horseman, of Saltcoats. Two pictures of hawks that he took this year appear on page 114.

Plum Creek was dredged three years ago but no dam was built on it until mid July of this year. Because of this and also because we have had a dry summer, the famed Oak Lake marshes have dried up to such an extent that acres and acres of bare mudflats exist. This has resulted in some rare birds moving into this area. One of these, the most striking shorebird I have ever seen, is the American Avocet.

Up to 1957 I had never seen American Avocets, but that year a pair nested in the Oak Lake Marsh. This was the only American Avocet record for Manitoba that year. Although Mr. Herman Battersby, my birding companion, and I did look thoroughly for the nest we couldn't find it. When we were looking for the nest the pair would fly around dive-bombing us just as Tree Swallows do when you are close to their nest. They also used the broken-wing act of the Killdeer.

By the end of May, 1958, fourteen Avocets were in this area. On June 23 two nests were found on the bare mudflat; one was about ten yards

from the nearest rushes, the other was about 100 yards. The nest was a slight depression in the mud lined with about thirty coarse rushes two to three inches in length. One contained four eggs, the other three young and one egg. The large, sharply-pointed, clay-coloured eggs are blotched with black and have the odd pale blue spot. They are larger than a Killdeer's egg, but smaller than a Mallard Duck's. Like the plover's eggs, they have all their small ends pointing inward in the nest.

The downy young are web-footed. They would run quickly to the water and swim away from us. They are slightly tinged with rust and when they sat still on the mud they were perfectly camouflaged.

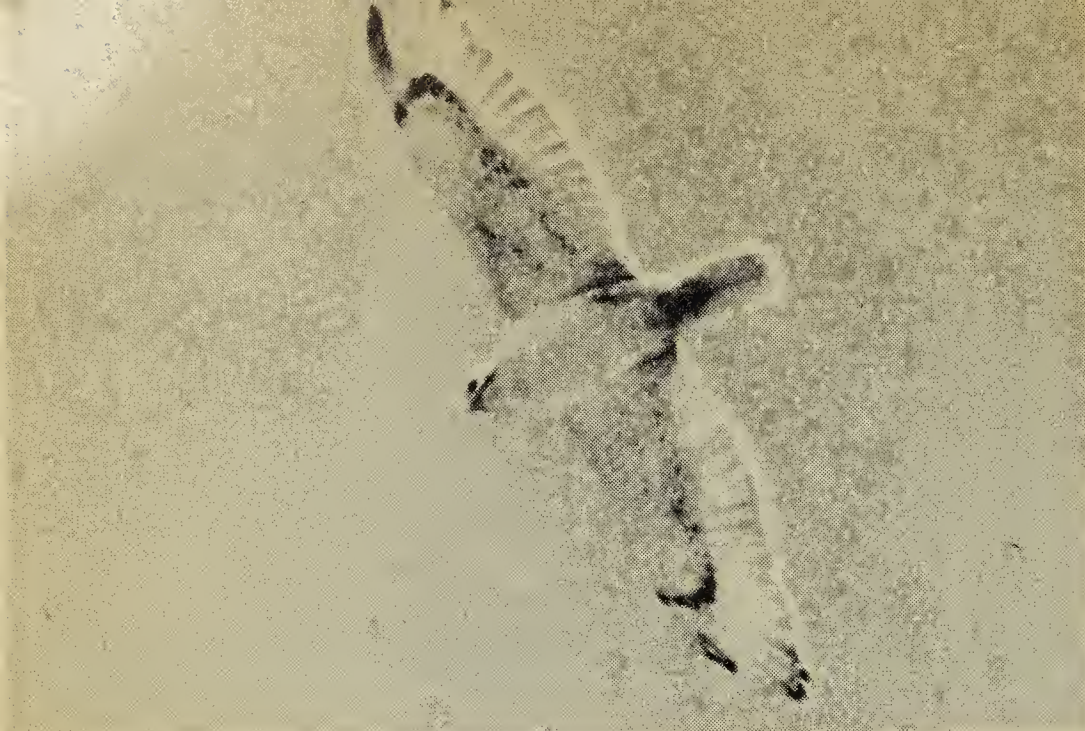
Mr. Eddy Giggins took about twenty feet of film and both Mr. Battersby and I took pictures with our cameras.

It is to be hoped that these magnificent birds will thrive in this area and will increase in number across the continent.

MAMMALS OF SASKATCHEWAN

We are pleased to announce that Harvey Beck's bulletin on the mammals of Saskatchewan is now being printed. As soon as it comes from the printers the bulletin will be mailed to those who have already written for a copy. The price of the Mammals of Saskatchewan is fifty cents. Order from E. L. Fox, 1053 Gladmer Park, Regina.

BIR



Ferruginous Hawk soaring over nest in Ermine, Sask.

Photo by F. W. Lahrn

Ferruginous Hawk's nest with one young, in a draw along the S. Sask. River

Photo by R. W. Fyfe



Female Sparrow Hawk hovering over nest on cliff in the Big Muddy Valley

Photo by R. W. Fyfe

PREY

Swainson's Hawk aloft-
over nest at Kindersley,
Sask.

Photo by F. W. Lahrman



Swainson's Hawk's nest
with three young, along
S. Sask. River

Photo by R. W. Fyfe

male Pigeon Hawk
landing after diving at
intruders near her nest,
at Kindersley

Photo by F. W. Lahrman



YOUNG RAPTORS

Photos by **Bill Horseman, Saltcoats**



Young Red-tailed Hawks, about two weeks of age—1958.



Young Great Horned Owl, about seven weeks old—1958.

Attempted Predation by Peregrine Falcon

Attempted Predation by Peregrine Falcon Observed at Regina

Since observations of the hunting tactics of raptorial birds and the response of their prey are only infrequently reported, chance observations of such nature are well worth recording. On May 9, 1958, at 1.50 p.m., as Fred W. Lahrman and I were checking shorebirds on a small pond about two miles south of Regina a Peregrine Falcon (*Falco peregrinus*) suddenly appeared in rapid flight over the pond. Separate flocks of about 35 Long-billed Dowitchers (*Limnodromus scolopaceus*) and an equal number of Pectoral Sandpipers (*Erolia melanotos*) flew up off the water before we actually saw the Peregrine. Both flocks kept in compact groups while milling rapidly back and forth over the surface of the pond. The Peregrine made several rapid passes at the flock of Dowitchers which swerved rapidly before its attacks, then suddenly, as a group, hit or dived into the water. Upon emerging one Dowitcher flew off by itself and the Peregrine at once flew after it. Just as the Peregrine closed in on it the Dowitcher dived into the water and the hawk overshot its posi-

tion. Almost immediately afterward the Peregrine flew rapidly away from the pond. Presumably, this was the same Peregrine which was seen here and in the vicinity on several other occasions. Previously it had been noted to make one or two rapid flights across a pond which held hundreds of shorebirds and to fly away without any bounty.—Robert W. Nero, Saskatchewan Museum of Natural History.

Attempted Predation by Peregrine Falcon Observed at Toronto Island

I was interested to read of Mr. Fred Lahrman's observation of a Lesser Yellowlegs submerging to escape a Prairie Falcon (**Blue Jay**, XV, 146). I witnessed a similar occurrence at Toronto Island on Sept. 17, 1957, when a young Peregrine Falcon dived at a mixed flock of shorebirds and a Semipalmated Sandpiper ended up in the lake. Three times the Falcon swooped down and tried to pick it out of the water and each time the sandpiper submerged. When the hawk left it returned to the beach, dishevelled and exhausted. After some minutes of rest, however, it revived and began to fluff and preen its drying plumage.—Roy Wallace, Toronto.

Gyr Falcon (*Falco rusticolus*) Record for Saskatchewan

By A. F. Oeming, Edmonton

On 11 October, 1957, my friend John Matthews of Edmonton while on a goose shoot near Luseland, Saskatchewan, observed an American hunter down a large falcon. The bird had stooped down on some ducks that were feeding near the hunter's goose decoys. Matthews was unable to observe the killing through his binoculars and upon walking to the scene of the killing he discovered the dead bird to be a large immature-plumaged female Gyr Falcon. The

bird was of slate grey coloration and weighed 57 ozs. In weight, color and age it was identical to the Gyr Falcon shot near Whitford Lake, Alberta, the previous fall.

INFORMATION WANTED— The writer would appreciate information on this species from anyone who has seen them during the fall and winter in Saskatchewan. Data as to color, location and activity at time of observation would be most appreciated. Of special interest would be any report of such a bird repeatedly seen in a particular area. Send information to Albert F. Oeming, Edmonton Zoological Society, Rm. 6, 10126-100 Street, Edmonton,

Prairie Falcon Nesting Records in Sask.

By Richard W. Fyfe, Saskatchewan Museum of Natural History



Photo by R. W. Fyfe

Walter Knudsen and Chris Willoway examining Prairie Falcon nest site 280 feet above the valley floor at the Big Muddy.

The first and only reported nesting of Prairie Falcons (*Falco mexicanus*) in Saskatchewan is that of a set of four eggs collected at Battle Creek (which flows from the Cypress Hills) by J. E. Bowman on May 3, 1914 (Godfrey, 1950. *Birds of the Cypress Hills and Flotten Lake Regions Saskatchewan*). To the present time no further nest records

have been recorded although these birds are occasionally seen and are listed as occurring in this province (Taverner, 1945, *Birds of Canada*; Bent, 1938, *Life Histories of North American Birds of Prey*).

On July 1, 1958, in Big Muddy Valley, three nest sites of Prairie Falcons were found by Walter Knudsen, Chris Willoway and myself. All three



Photo by R. W. Fyfe
Prairie Falcon.

aeries were located within a distance of one mile which would indicate that these birds nest regularly where suitable locations may be found in this valley. It was relatively easy to locate the aeries because they were marked by "whitewash" and because the enraged parents came as much as one half mile to meet us and screamed overhead until we left. Two nests containing three young each were found on the sides of the 300-foot mud and shale cliffs in the valley, approximately 280 feet above the valley floor. The third was located on a somewhat lower cliff estimated at about 100 feet, the nest cavity being some 14 to 20 feet below the top; two young were observed perched at the entrance. All three aeries faced south or south-east and were in large cavities on the steepest sides of the cliffs. Two of the nests were inspected at close range but the third was considered out of reach. The cavities which were examined were large and apparently naturally formed, the first being approximately 6 feet in diameter and extending 5 to 6 feet into the face of the cliff; the second, although only $2\frac{1}{2}$ to 3 feet in diameter, was about 10 feet in depth. No nesting material was present and only a small amount of debris from past meals was found.

Two additional active aeries have been found and checked: one with at least two young was found south of Beechy in the South Saskatchewan River Valley by Tom Gentles in June of this year and verified by myself on July 5; an additional nest in the Big Muddy Valley was found and identified by three boys and myself on July 12, 1958.

Both of the above nests were also found on southern exposures and in rather large natural cavities. Little was found in each, although no nesting material was present, and each was well marked by "whitewash" at the entrance of the cavities. The aerie heights varied somewhat from the others: the one found south of Beechy was approximately 50 feet in height on a 75 foot cliff; the one found in the Big Muddy Valley on July 12 was approximately 150 feet up the side of a 200-foot cutbank.

An additional nest site which was probably that of a Prairie Falcon was found vacated in June in the South Saskatchewan River Valley south-west of Glidden. Small feathers were seen near the entrance while below this and the adjacent ledge "whitewash" was present. Further down the cliff a wing feather of a Prairie Falcon was found. While we were attempting to reach the site a Prairie Falcon came to the area and circled above us but did not exhibit the concern shown by the other birds when we were near their young. We suspect a possible early nesting of the birds at this nest. However, a further check will be made in the coming year to determine whether this is a used aerie.

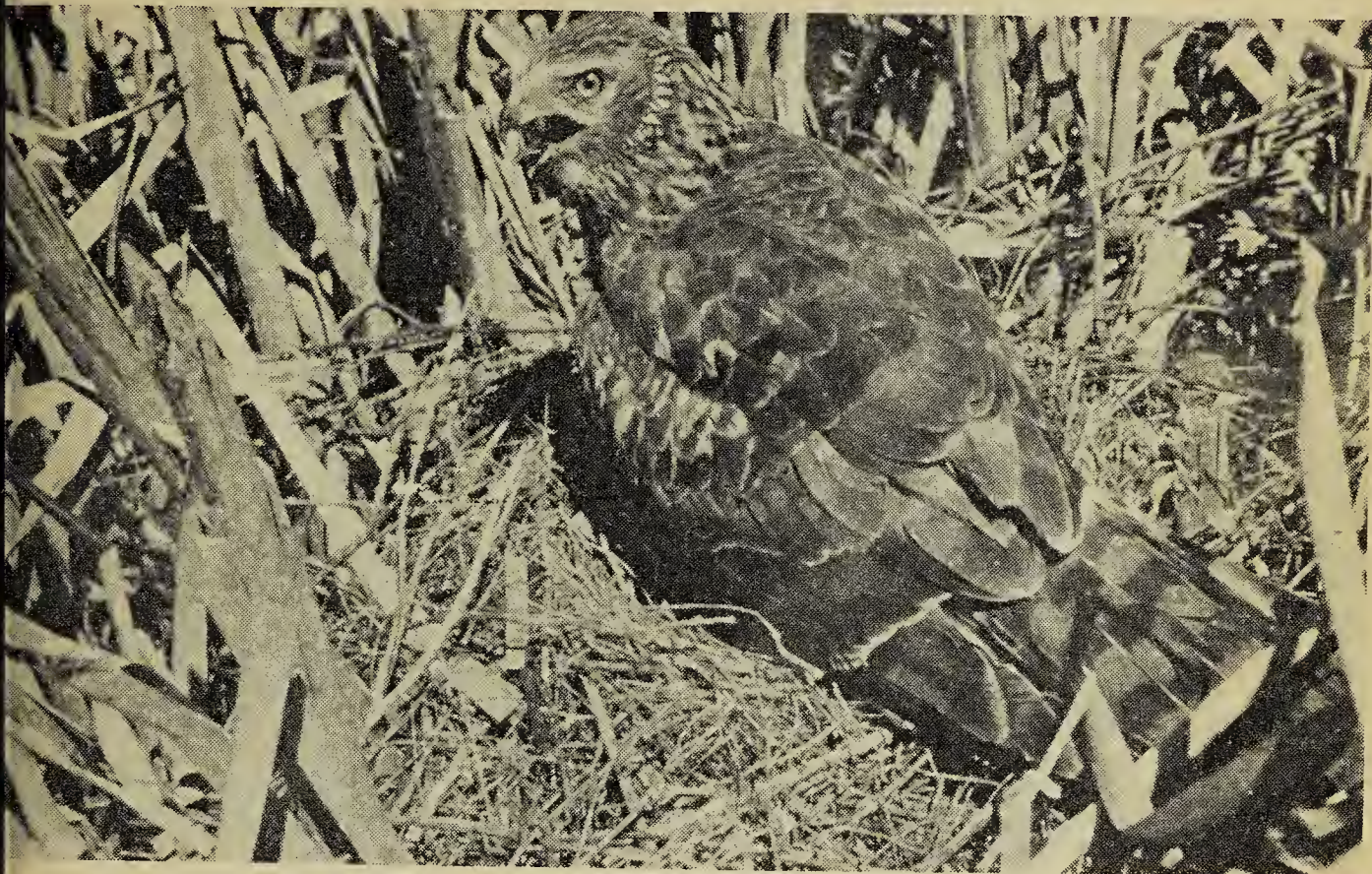
Any additional nesting records of a Prairie Falcon are valuable as each is a verification or extension of the known breeding range in Canada. However, I would warn against the examination of new nests until mid or late June. Prairie Falcons may leave their eggs if disturbed for too long a period early in the nesting season, but if left undisturbed, the birds will use one aerie for many years.

Protection of Birds of Prey To Be Discussed at Annual Meeting, Saskatoon, October 18th

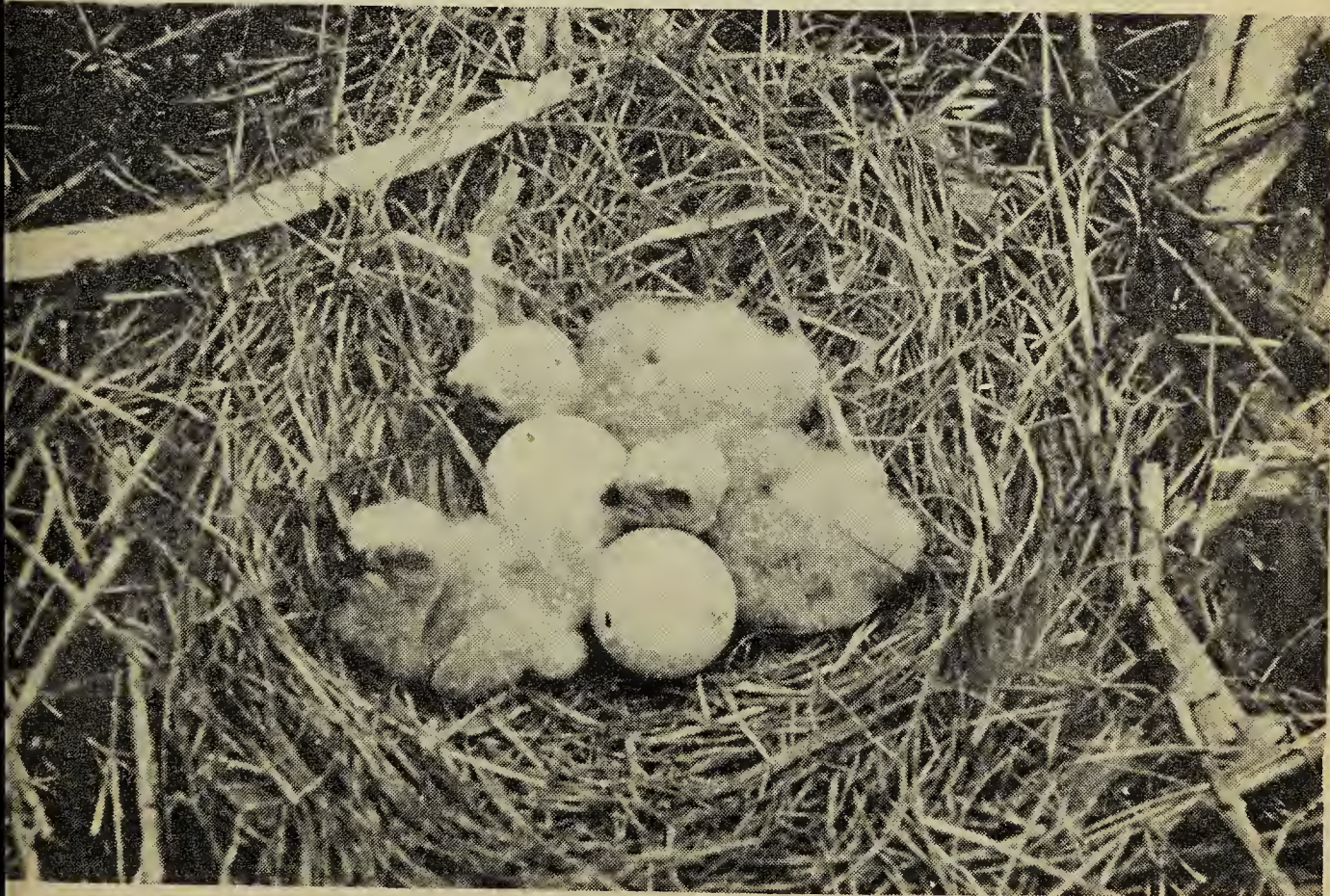
If you are interested in the protection of birds of prey in Saskatchewan, plan to attend the **SNHS ANNUAL MEETING, OCTOBER 18, in SASKATOON**. If unable to attend the meeting, please send us a letter in support of a resolution for protection.

Marsh Hawks

Photographs by Doug Gilroy, Regina



Here is a female Marsh Hawk standing over her nest. The nest is built in about six inches of water among dry cattails. The Marsh Hawk is the only representative of the harriers in North America. It spends a long summer in our fields and marshes and is well known to prairie farmers—June 12, 1958.



Newly hatched Marsh Hawks are as cute as baby domesticated chickens. They are fawn in colour. They are usually four to seven bluish-white eggs. Here they are hatching. Note chipped egg.

Falconry in Saskatchewan

By **Richard W. Fyfe**, Saskatchewan Museum of Natural History



Photo by H. Meng
Training a Goshawk

For many years falconry was regarded as the "Sport of Kings". Now this ancient art is being revived and a Saskatchewan Falconry Association has recently been formed. This organization is the direct result of a contact with Al Oeming and the interest inspired through his talk to the Regina Natural History Society in March, 1958. Since then, Mr. Oeming, Mr. Beebe and other qualified falconers have given assistance to this project and an active organization has developed.

Falconry appeals to those interested in the outdoors and in recreational hunting, and encourages greater contact with the natural environment. Few field sports lend themselves as well to the interests of both sportsmen and naturalists as does falconry. It is a year-round activity, taking the participants into the field through fall hunting, winter exercising, spring nest finding, and summer training. Close association with hawks and falcons necessarily cultivates a keener interest in birds, their identification, flight, needs and moods, as well as their relationships in the biotic community.

Predation, which is a normal part of the daily existence of game, places the falcon on relatively equal terms with its prey. Trained falcons are by no means as deadly and accurate

as the shotgun and, unlike the hunter, falcons leave no birds to die of lead poisoning or crippling. Their prey is either taken or it escapes unharmed.

Our objectives are briefly: (1) to promote falconry as a field sport in Saskatchewan; (2) to stimulate an increased interest in hawks and owls and to conduct a continuing educational programme on these birds; (3) to establish a hawk banding programme in Saskatchewan; (4) to co-operate to the fullest possible extent with the natural history societies and sportsmen's groups in this province for the conservation of our native birds of prey.

In organizing this group full co-operation has been received from the Wildlife Branch, Department of Natural Resources. Precautions have been taken to protect the Falconry Association and its members from would-be falconers who, by mistreating captive birds or misusing trained hawks, might create adverse public opinion. Within our own organization by-laws have been established which prohibit this. Our hunting regulations permit hunting only with the landowner's consent, and the hunting only of species considered harmful and not protected by the Migratory Birds Convention Act or game species during open season. Each member is required to have a falconry permit issued by the Wildlife Branch, and anyone with Prairie Falcons, Peregrine Falcons or Goshawks will automatically be required to obtain a hunting license annually.

At the time of writing, eighteen active members are caring for and training hawks this year. Our first year is considered primarily that of apprenticeship, our main objective being the care and familiarization with birds of prey. Some training is definitely planned this year, but because of our own inexperience everyone has been cautioned not to expect too good results. The main field of activity has been nest hunting. Several weekends in the Regina, Kindersley, and Big Muddy districts in each case involving as many members as possible, produce

the following discoveries: 5 active Prairie Falcon nest sites, 7 nests each of Pigeon Hawk, Sparrow Hawk and Ferruginous Hawk, 6 Swainson's Hawk nests and 2 each of Red-tailed Hawk and Marsh Hawk. From these we have obtained the following young: 3 Prairie Falcons, 4 Pigeon Hawks, 7 Sparrow Hawks, 2 Ferruginous Hawks. Through the co-operation of Dr. S. Houston 2 Cooper's Hawks were also obtained. Here we might mention that under no circumstances will all young be taken from any one nest by our group. We do not wish to disturb nesting because, provided the parent birds can successfully raise young at any nest site, they will return annually to that location. This is of the utmost importance to us as we want to insure the presence and protection of our native hawks.

As a group we wish to co-operate in every possible way with the Natural History Societies and we welcome new members from these groups as well as any information we may receive on hawks, falcons

or eagles in Saskatchewan. Anyone interested in falconry should write to: The Saskatchewan Falconry Association, c/o Richard W. Fyfe, Saskatchewan Museum of Natural History, Regina.



Photo by R. W. Fyfe

A falconry club activity—spring nest finding (Walter Knudsen at Cooper Hawk's nest)

Magpie Nest in Building

By Robert W. Nero, Saskatchewan Museum of Natural History

A partly-constructed nest — apparently built by Black-billed Magpies (*Pica pica*) — was found by Richard W. Fyfe, Fred W. Lahrman and myself on June 24, 1958, within a frame building at an abandoned farm six miles south-west of Kinderley. This building was formerly a barn; it had a flat roof and half of the floor was of dirt. The nest was built within the seven inch space between a rafter and the ceiling and was about six feet above the ground. It was adjacent to one wall and right next to an open door. The nest consisted of an inner shell of well-hardened mud, nearly six inches deep on one side, one-half to one and one-half inches thick and about seven inches in diameter. It was fairly smooth on the inside and was surrounded by a loose mass of dead twigs, many of which were cemented to the mud. The whole thing was about one and one-half feet in diameter and, of course, stuck out on both sides of the four inch rafter. We were rather astonished to see a

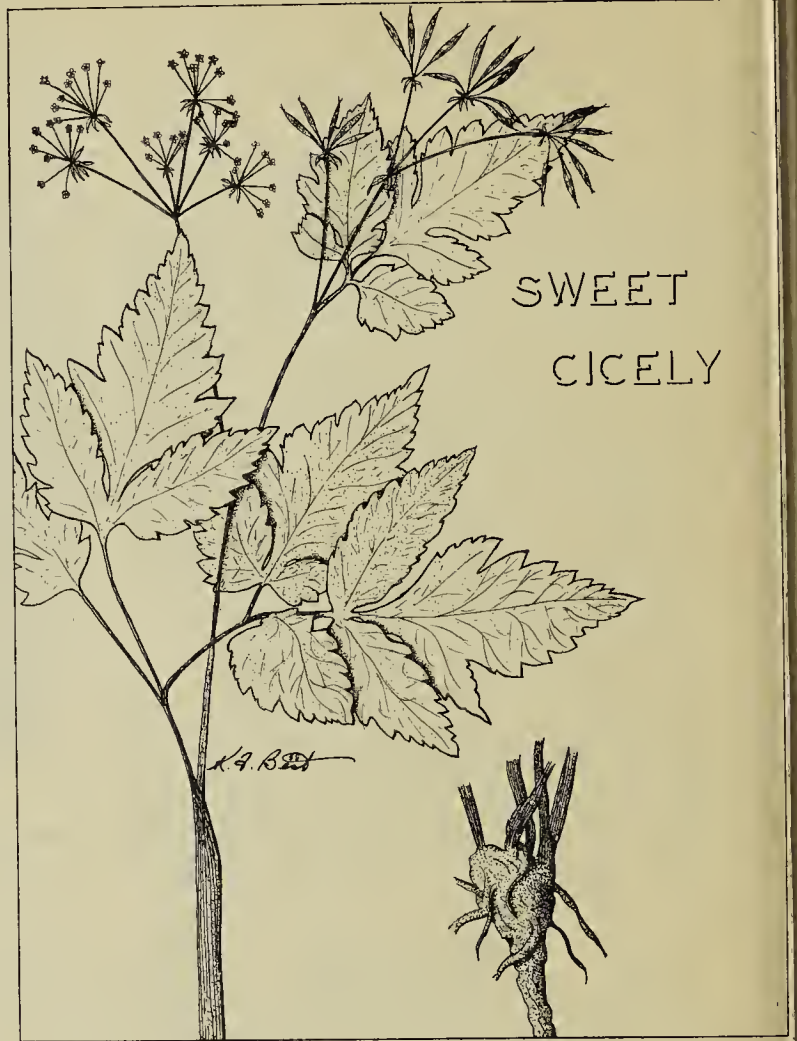
bulky nest of this sort squeezed into such a narrow space as well as within a building. A slight depression on one side of the nest would just have permitted entry to a Magpie-sized bird. Many twigs, some three feet long, which lay on the floor, suggested repeated attempts to bring nest material which could not be worked into the nest. A clean white feather found on the floor nearby appeared to be from a Magpie, and we were in agreement that the nest was built by this species. There was no nest-lining and there were no indications that the nest had been used at all.

L. B. Potter reported an active Magpie nest located beneath one rail and between two ties of a railway bridge (1927. *Freak nesting site of a Magpie*, Condor. 29: 249). "It is supported by two intersecting braces and protected from above by the aforementioned girders. The usual 'dome' is, therefore, absent, being both unnecessary and impossible in the restricted space available. . . ."

Edible Plants of Saskatchewan

By **Keith Best** and **Archie Budd**, Swift Current, Sask.

Continuing our discussion on edible roots, we turn again to the Legume family. The roots of all the members of the *Petalostemon* or *Prairie Clover* genus are edible. We have three or four species, two of which are quite plentiful on the prairies, especially on drier hillsides, the purple-flowered (*P. purpureus*) and the white-flowered (*P. candidus*). They are low-growing herbs with small, odd pinnate leaves and tiny flowers, borne in dense spikes from one to two inches long, the lower flowers generally opening first. The purple-flowered as a rule grows somewhat more erect than the more prostrate white-flowered species. The roots were chewed or eaten raw and the leaves were al-



PRAIRIE
CLOVER



so used by the Indians to make a tea-like drink.

Returning again to the Carrot family, we must not fail to mention the *Osmorhiza* or *Sweet Cicely* genus of which we can find three species in shady woodlands. These plants bear umbels of a few white flowers and later on have linear, bristly fruit. The roots are edible by humans and were used by the Indians; and the entire plant, roots and foliage, is very palatable to livestock.

The Puccoons or *Lithospermum* genus, of which we have two common species, belong to the *Boraginaceae* or *Borage* family. They are herbs up to 18 inches high with narrow, alternate leaves up to two

NARROW-LEAVED PUCCOON



inches long. The flowers are salverform, from a half to one inch long, yellow in colour and with a long tube, and flaring out at the top. The fruit are white nutlets about an eighth of an inch long and are very hard, giving the generic name of *Lithospermum* meaning "stone seed". The roots are coarse and fleshy and were eaten boiled or roasted by the natives. Occasionally the leaves were also eaten.

Finally, in our discussion of plants with edible roots, we come to the perennial sunflowers, many of which bear tubers or fleshy roots. These plants are so well known that description is quite unnecessary. The best known, of course, is the Jerusalem Artichoke which is not found in Saskat-

chewan, but is in southeastern M a n i t o b a. We do have, however, Narrow-leaved Sunflower (*Helianthus Maximiliani*) which provided an edible root for the Indians, as did probably the Clustered, the Beautiful and the Tuberous-rooted Sunflowers. The Narrow-leaved is found as far west as Swift Current. Generally its leaves are folded lengthwise. Not only were the sunflower tubers found edible but also the fruit, or sunflower "seeds" so popular today. There are many more plants bearing edible roots but we think we have mentioned a sufficient number to show that it was by no means difficult for the early inhabitants of this country to obtain much variation in their diet.

NARROW-LEAVED SUNFLOWER

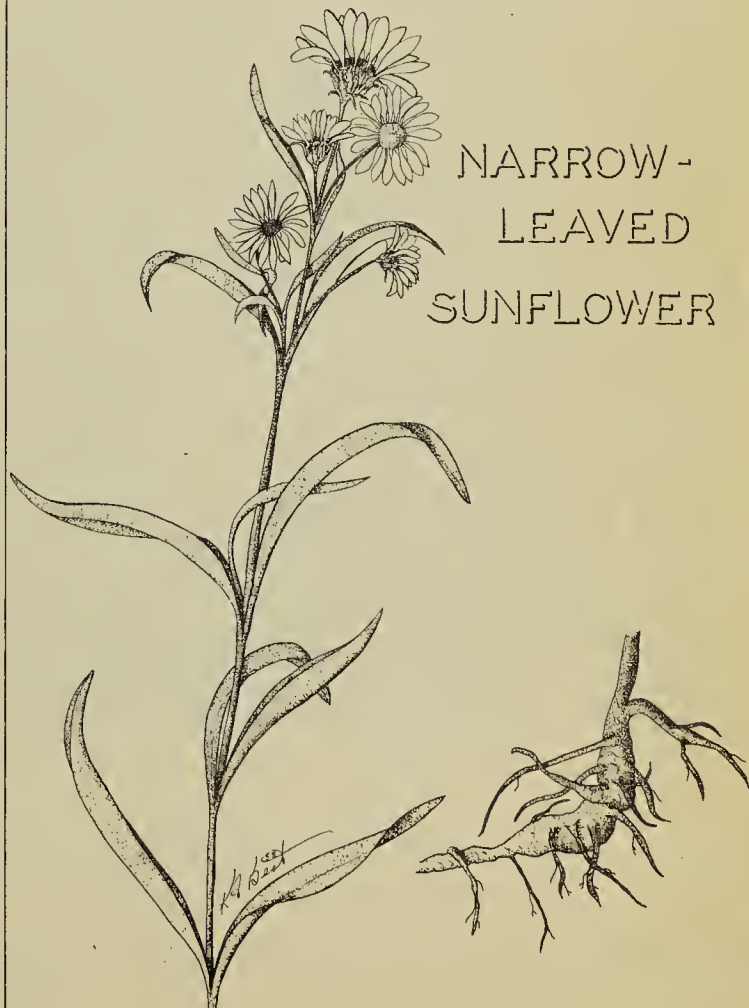




Photo by W. C. McCalla

SHOWY MILKWEED
Asclepias speciosa Torrey

A lusty perennial, stems 2½ to 3 feet high, often massed in large colonies.
(½ nat. size.)

New or Little Reported Sask. Plants

By John Howard Hudson, Regina

The dry weather this summer has made botanical collecting unrewarding. However, we were able to pick up a few plant curiosities this spring, such as:

Astragalus purshii Douglas (Pursh's Milk Vetch). Collected by Dr. G. F. Ledingham and myself May 18 on dry short grass prairie south-east of Climax, on N.E. $\frac{1}{4}$ 1-2-18 W. 3rd. Also seen by us on the same day on Boundary Plateau N.E. $\frac{1}{4}$ 14-1-23 W. 3rd and the next day at the east end of Old-Man-on-his-Back Plateau N.W. $\frac{1}{4}$ 33-2-24 W. 3rd. This plant looks much like *A. lotiflorus* except that the purple-keeled creamy flowers are about 2 cm. long and always stalked, and that the pods are densely covered with long silky hairs. It has a wide range in the High Plains and Great Basin areas of the U.S., apparently just crossing the border into Saskatchewan.

Antennaria dimorpha (Nutt) T. & G. Collected by G. F. Ledingham and myself May 18 N.E. $\frac{1}{4}$ 1-2-18 W. 3rd (south-east of Climax) and on May 19 on S.W. $\frac{1}{4}$ 3-3-24 (east end Old-Man-on-his-Back Plateau). This species of the *Antennaria* or Pussy-paws genus is distinctly different from the usual run of *Antennarias*. It does not spread by runners, but grows in patches about 5-6 cm. diameter from a woody crown. The pistillate (female) plants are totally

stemless, bearing 12-18 mm. long and 4 mm. in diam. scattered singly on the plant. The staminate heads are also borne singly, but on apologies for stems about 1 cm. high. These staminate heads are of more orthodox *Antennaria* form, hemispheric and about 6mm. across. Since the leaves are grey-green, narrowly oblanceolate, and about 1 cm. long, the pistillate plant looks remarkably like a *Townsendia*. Rydberg gives the range as "Mont.-Neb.-Colo.-Nev.-B.C."

Astragalus Kentrophyta A. Gray. Since this plant is reported in Budd's standard flora of our area, I need only remark that G. F. Ledingham and I found this plant on May 17 on S.E. $\frac{1}{4}$ 13-15-17 W. 3rd, on a wind-swept gravel flat among sand dunes north of Webb. I took flowering specimens here on June 5.

Draba micrantha Nutt. Found this in a gravel pit June 11, N.W. $\frac{1}{4}$ 18-5-12 W. 2nd, south-east of Goodwater. This small mustard looks something like the related *Draba nemerosa*, Yellow Whitlow - grass, which is common. The differences are: few or no stem-leaves (leaves mostly basal); stalks bearing pods diverging from about the same place at the top of the stem; pods about twice the size, 10-12 mm. long, 4 mm. wide. The plant is widespread through the Middle West of the U.S.A.

Lichen, A Plant Which Grows Almost Everywhere

By Joyce Dew, Saskatchewan Museum of Natural History

Lichens are very common plants. They can grow where no other plant can grow and are found living in more different places than any other plant. They can live on bare rocks, in the cold Arctic or on mountain tops, in tropical jungles and in your own back yard. They are a plant which you can find growing at any time of the year unless the ground is heavily covered with snow. The only place where you are not likely to find them is in and near cities.

You have certainly seen lichens, but perhaps you were not aware of what they were.

Lichens are great pioneers and help to make soil from rocks. When the weather is dry they dry up and shrink, then when it rains they start to grow again. Since they cling tightly to the rock, this expanding and shrinking breaks off rock particles. Lichens also secrete an acid which helps dissolve the rock. The rock particles along with tiny bits



of dead lichen form soil. Soon other plants are able to grow where once only lichens could grow.

The crustose lichens are one of the most common and come in various colours, among them black, green, yellow and rust. These, as their name suggests, are crusty scale-like plants. They are found clinging tightly to rocks or dry wood.

To find crustose lichen look for rocks which have been lying undisturbed for some time. Rocks from gravel pits, or rocks freshly turned out of the soil, are not likely to have lichens growing upon them. Crustose lichen can be found in any part of the province. The one illustrated here (C) was found growing on a rock along the shore at Last Mountain Lake. To collect this lichen, you will need a hammer and chisel to chip it loose from the rocks, unless you are prepared to carry the whole rock with you.

Some lichens grow in small erect clumps and branch like miniature trees (A). These are fructose lichens. Two of the fructose lichens commonly found in wooded areas in cen-

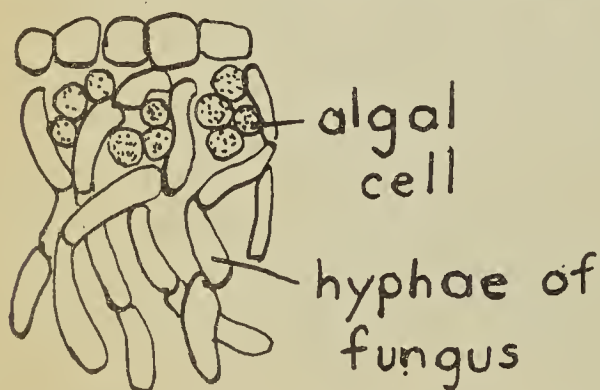
tral and northern Saskatchewan are illustrated here. They are both pale green in colour and grow to be about an inch in height. Reindeer Moss (A₂), as one of those lichens is commonly called, is the regular diet of caribou and musk-ox. Those of you visiting the Saskatchewan Museum of Natural History can see Reindeer Moss in the Barren Ground Caribou display.

A third type of lichen is foliose lichen (B). Foliose lichens are leaf-like in appearance. One of the commonest, illustrated here, is apple green to brownish above, white below when fresh, with dark veins. Foliose lichen and fructose lichen in combination with mosses and small woodland plants can be easily grown in terrariums.*

There are over 16,000 species of lichens, yet all of them have one thing in common. Each lichen consists of two plants growing together: a fungus and an alga. One fungus everyone is acquainted with is the mushroom; algae are common as green pond scum.

Since the fungi and the algae which make up the lichen each benefit from the relationship, they are said to be living in symbiosis. The fungus cannot manufacture its own food but it provides protection for the algae. The algal cells in the lichen are round cells. The hyphae (threads) of the fungus wrap around the algal cells and take some of the food which the algal cells manufacture.

* Send to the Saskatchewan Museum of Natural History for a folder on "How to Set Up a Terrarium".



Microscopic cross-section of a lichen.

FIELD CHECK-LIST OF SASK. BIRDS

The revised field check-list of Sask. birds is available free from the Saskatchewan Museum of Natural History, Regina.

Boys' and Girls' Section

Edited by **Joyce Dew**, Saskatchewan Museum of Natural History



SHARP-TAILED GROUSE

Michael Rhodes, 11, Moose Jaw

Michael writes this about his drawing: "This morning I was down at the Library at 6:00 a.m. to go on a trip with the Natural History Society. I saw the Grouse near Mortlach (5 or 6 of them) just as they were finishing their drumming. When we went home I did this picture."

PRIZES WINNERS AND COMMENTS

Some excellent work was sent in for this issue of the **Blue Jay**. Don Karasiuk not only shows careful observation of and interest in his surroundings but has also shown good writing style in his "Rendezvous at Emma Lake." Jacob Jmaeff sent in several items, two of which we have printed. Among other things, he has made some interesting observations on fox behaviour. More animal behaviour, this time among birds, is described in "The Snowy Owl in Trouble" by Grant Mehling. Some of you will have noticed that not only do crows gang up on other birds, but that other birds also gang up on crows (e.g. kingbirds and redwings and blackbirds).

The prizes, this issue, are awarded to Don Karasiuk, Jacob Jmaeff, and Grant Mehling. A prize is also awarded to Keith Schwartz, Grant's teacher, who sent Grant's entry in. Teachers are reminded that if they send in prize-winning work from their pupils, they, too, are entitled to a prize. The prize winner chooses one from a list of 12 books of interest to both children and adults.

Teachers and others wishing material to help them plan nature hikes and follow-up activities can write to Extension Services, Saskat-

chewan Museum of Natural History, Regina, for a booklet, "How to Conduct a Nature Study Group". This includes suggestions for sketching from nature and making observations, photographing birds and mammals, collecting equipment, what to collect and how, keeping live animals for pets, setting up an aquarium and terrarium, and reference sources.

CONTEST RULES

Any young person may submit material for printing in this section of the **Blue Jay**. The entries must be first-hand observations in the form of letters, stories, poems, black-and-white sketches or photographs. Letters and stories should not exceed 500 words. All entries must be accompanied by the name, age and address of the sender, and the name of his or her school.

Two or more book prizes will be awarded with each issue of the **Blue Jay**. Teachers who send in entries from their pupils may also qualify for a prize. Winners will be sent a list of books from which to select their prize. Send in your nature observations and share your experiences with others. Entries should be addressed to Boys' and Girls' Section, **Blue Jay**, 2335 Athol St., Regina. The closing date for the next issue is October 15, 1958.

THE FOX'S SIGNAL

by Jacob H. Jmaeff, age 13,
Kamsack, Sask.

On May 8, when my father was preparing a seed bed, a Red Fox trotted to within twenty feet of his tractor and waited for him to pass. On May 20 father again saw the fox in the vicinity of an old granary. Then on May 27, while loading a truck, he saw the fox dash from under the granary. Suspecting the fox lived there, he investigated and found her den under the granary with three entrances, one on the west, one on the south and one on the north.

This building is located beside a hay meadow with willow thickets to the south, a poplar hedge to the north and the meadow to the west. The east has a large field of summer fallow.

After school on Wednesday, June 4, I went to the aspen hedge, up wind to the granary, and waited. The swaying of grass announced the mother fox's coming. In her mouth was a wing of a chicken. Suddenly out stormed three pups. They rushed at their mother and began tugging at the meat and growling.

They looked just like their mother, all red and had such beautiful tails.

Suddenly the mother fox's tail swatted down at the ground. Like lightning the pups shot for the den. When the last was safe the mother hurried to shelter. I suspected she had scented me.

RENDEZVOUS AT EMMA LAKE

by Don Karasiuk, age 11,
Prince Albert, Sask.

Saturday, the day of field trips, held something of interest to everyone who attended the summer meet of the Saskatchewan Natural History Society.

At 8:45 a.m., we were assigned to our cars and rode down the dusty road. Our destination: north end Christopher Lake, 10 miles.

We quite flew out of our cars and sorted ourselves into various groups ready for adventure. I tagged along with the botanists although I wasn't one. We started from the shore and continued up the slope. First were seaweeds, then cattails rushes,

horsetails, grasses, and a bit of second growth. The real thrill, however, came when we stepped past the wall of high shrubs into the forest.

The three dominating trees were balsam, poplar, white spruce and white birch each often attaining the height of 100 feet. Little green cushions of moss were strewn about the forest floor. Shell-white poly-pores and little banners of moss hung from the boles. Starflowers, bunchberries, fireweeds, bluebells and an occasional rose graced the scene.

When we were satisfied we moved on, discussing plants as we went.

On the way back we followed our guide off the trail to a black spruce bog. Alders circled the little clearing where we stopped. The moss was deeper here, and it circled little brown pools where marsh marigolds grew. Here, using a hollow metal "cane," our guide dug to permafrost.

Upon returning to the parking site we found the D.N.R. boys had prepared sandwiches, coffee and tea for lunch.

During the free time afterward I watched birds, notably the osprey, a "lifer".

Soon afterwards we had to turn our backs on the little bit of paradise that was Christopher Lake.

After days like these I wish that Saskatchewan was smaller, so I could attend every summer meeting of the Saskatchewan Natural History Society.

MY UNCLE'S BUFFALO

by Lyn Lamers, age 6,
Blaine Lake, Sask.

My uncle has a little group of buffalo. We went to the pasture and saw a baby buffalo. It was born that day. It could hardly walk. It wobbled to its mother and lay down.

A SPARROW

by June Lamers, age 6,
Blaine Lake, Sask.

Once our black cat caught a sparrow. We ran to the cat. I went and took the sparrow. Then I got a kleenex. We put it on the wound. We gave the bird some water and it got better and it flew away.



LONG-BILLED CURLEW

Robbie Cannings, 10, Penticton, B. C.

THE CURLEW'S NEST

by Robbie Cannings,
Penticton, B.C.

On May 10 this year I went with my family to look for curlews near White Lake which is about fifteen miles south-west of Penticton, B.C. The curlews are usually found on a flat benchland above the lake. We were driving across this flat when suddenly a curlew flew and fluttered as if it had a broken wing. We stopped the car as quickly as we could and got out. There behind the car was the nest with four eggs in it. The eggs were brown with darker brown spots. They were about the size of hen's eggs. The next week we went back again and took pictures of the bird on the nest. On May 24 we went back and there was one egg left. The little bird was pecking its way out of the egg. We looked around for the other chicks and found one. We took quite a few pictures of it. When we were about to go home I was walking back to the car and I just about stepped on another chick. I guess the other chick was around somewhere where we couldn't find it. We think the mother takes the young to a wetter place down by the lake because when we went back on the first of July there weren't any curlews on the bench.



Curlew's eggs in the nest found on May 10, at White Lake.

THE TREE SWALLOWS

by Marlene D. Hills, age 10,
Omand School, Kinistino, Sask

One day while my friend and I were swinging, we noticed two tree swallows. They were flying around the swings scolding us. We wondered what all the noise was about, so we got off the swings. We sat on the steps of the school and watched them. They went into the bar of the swings. We thought they had a nest in it but they didn't. We did not see them for a while. Now they have their nest in the bluebird house.

THE SNOWY OWL IN TROUBLE

by Grant Mehling, age 14,
Stornoway, Sask.

One evening while out crow hunting I heard an owl hooting, but I paid no attention because he was in the valley.

Afterwards, as I began to walk towards home I heard a crow in the direction the owl hooting had come from. Much to my surprise, crows, one after another, seemed to come out of nowhere from our neighbour's pasture, and flew past our yard into the creek where the crow was still cawing and being joined by more as they came. I thought, "If only I could get near enough to them I would have a good chance of getting one."

I hurried down the creek and up through the brush on the other side. When I reached the other side the noise of the crows was enough to scare a person. The trees did not look green, instead they looked black with crows. When I stood up to aim a big white bird flew from a tree and all the crows after it. I ran down the next creek and up the other side on to the field. From there I saw a Snowy Owl with approximately thirty crows cawing and attacking it from every side. Meanwhile the Snowy Owl was flying to a nearby bush of high trees. Here he landed in the trees only to be followed by the crows. I sneaked up behind the next bush and from there saw a perfect target. A crow was sitting out on a limb seeming to be unconcerned about the owl but it seemed to think it was with the others and therefore it had to do what the others were doing.

When I shot I didn't expect to hit him, and I didn't, but much to the relief of the owl the crows began to fly out of the trees and in the direction they came from. The owl then flew back to where he was found by the crow, but now only two were following him. He was now relieved of some of his trouble.

PEACEFUL NEIGHBORS

by Jacob H. Jmaeff, age 13,
Kamsack, Sask.

On May 9 while walking through the bush, I came to a place where there was a thick undergrowth. Just as I stepped forward a Mallard Duck

burst forward and lured me away presumably from her nest. I decided to follow. Suddenly I heard a rustle and a Ruffed Grouse went creeping along the ground.

I studied the area. I saw the nest then another. There were the Mallard and grouse nests within two feet of each other! They were at the base of an old dead willow tree. The Mallard's nest was lined with soft greyish down, while the grouse's was just a pit in the ground lined with last year's aspen leaves.

Wondering how the wildlife neighbours got along I strolled near a week later. The grouse was looking her own separate way and not minding at all. The Mallard kept looking at the grouse but showed no hostile attempts.

SWALLOWS

by Linden Hubbard, age 11,
Grenfell, Sask.

This has been a good year for swallows at our place. There are around 90 Cliff Swallows, 2 Tree Swallows and 8 Barn Swallows here now.

The Barn Swallow has a dark blue back, buffy breast and a deeply forked tail. The Cliff Swallow has a white patch on his forehead, white breast, pale rump and a square tail which can easily be told from the Barn Swallow. The Tree Swallow has a blue-black back and a clear white breast.

The Tree Swallows rested in the combine. They raised four young but one was found dead later.

There are four pairs of Barn Swallows. One pair nested in the new barn rafters and raised four young. Another pair nested in the garage; the third built a nest in the old barn's rafters and raised three young. The other nest was not found. Two young learned to fly and left but the other one seemed to be injured and hopped around in the yard for two days while the parents fed it. Now it has disappeared. The nests are made of mud.

The Cliff Swallows arrived June 25 and have built 45 nests already. Three nests fell down but they have them partly built up again. They get wet clay from the dugout nearby and put it on in gobs. One brings the clay while the other puts it on. They

(Continued on page 144)

Prairie Dogs

By Ralph F. Stueck, Abernethy

Have you ever visited the home of the Prairie Dog? The only remaining dog town in the Commonwealth is in the valley of the Frenchman Creek, about 12 miles southeast of the little town of Val Marie, Sask. At this present moment, I am at that very spot with my back against my "Wandering Wigwam" overlooking the weird, lonely range of dog-town. Pencil in hand, I am writing on the back of a Royal Bank calendar to stir your interest in our prairie phenomena.

Of all the animals I have ever captured for zoos, the Prairie Dog is the strangest and most talked of. Yet, less than five per cent of Canadians have actually seen a live Prairie Dog. In this vicinity there are several dog towns, but they are in such remote places that the general public sees little of this animal that has lived on the prairies for centuries.

Like the desert rabbit, the Prairie Dog needs no water other than that obtained from the short dry grass that grows in dog-town. He lives in a colony with laws that every citizen abides by. He is a busy-body, and right now (July 10) I can see with binoculars from a distance of half a mile that he is busy cutting and piling grass to dry for winter fodder. It is "haying time" of course, and possibly harvest also, and with no labour bills to pay either!

The den of the Prairie Dog is six inches in diameter, twenty or more feet deep, and almost perpendicular. The opening rises above ground like a doughnut. This doughnut serves as a verandah, running water off during flood rain storms. It is made of packed, hard clay. When it is raining, the Prairie Dogs mortar and trowel the inner wall with their noses as a dog buries a bone and packs the ground afterwards with his nose.

Living in a colony, the Prairie Dogs are very sociable in their habits. They often meet in groups of eight or ten and seem to chat together while rubbing noses, hop-

ping up and down and repeating the call "ee-ee". During mid-winter they hibernate together below the frost line, where there are no fuel bills or meal tickets to pay. That beautiful long sleep takes three to six hours to awaken from.

Such is the home of the Prairie Dog. If it were possible, good reader, I would that you could sit right here with me and view to your heart's content a true prairie scene.

In this day of great travel, the tourist is always fascinated by roadside attractions. In the future I would like to see a scenic highway up the Qu'Appelle Valley and a little Prairie Dog town established along the way where the tourist could stop and view at leisure one of the wonders of the prairies.

EDITOR'S NOTE: A recent study of the Prairie Dog has just come to the editor's desk. It is Ronald E. Smith's *Natural History of the Prairie Dog in Kansas*, miscellaneous publication No. 16 of the University of Kansas, Museum of Natural History, published June 17, 1958. The 36-page publication deals with historical background, nature of the study and methods followed, description and distribution of the Prairie Dog, food habits, behaviour, molt and pelage, reproduction, burrows, and population changes.

Ronald Smith studied Prairie Dogs from June of 1955 to June of 1957, in Barber County, in one of the large (115 acres) Prairie Dog towns in Kansas by means of observation and live trapping, supplemented by laboratory investigations. The town he studied is at least 30 years old. In the last 52 years, almost 2,442,955 acres of Prairie Dog towns have been destroyed in Kansas; less than 57,145 acres of Prairie Dog towns remain in the state and 20,000 of these acres were scheduled for poisoning by the end of 1957. Because of their gregariousness, Prairie Dogs are easily poisoned and whole towns thus completely destroyed. In the light of this destruction, Mr. Smith concluded his study with a strong plea—"that the farmer-rancher think of control of these animals instead of their total destruction. He has a two-fold obligation in this connection to his progeny; 1) leave his land in better condition than when he received it; 2) retain the aesthetic value inherent in the native plants and animals on that land. Proper management of cattle will insure a good cover of grass that is of monetary value to the farmer, will fulfill his obligation to his progeny, and will control numbers of the prairie dog without annihilating the species (since overgrazing of the range by cattle or bison has been shown to be necessary before the Prairie Dog can successfully establish itself)."

Individuals may obtain this bulletin by writing to the Museum of Natural History, Univ. of Kansas, Lawrence, Kansas (send money to cover cost of mailing).

Hoary Bat Parturition Date

By **Robert W. Nero**, Saskatchewan Museum of Natural History

Actual birth dates for free-living mammals are seldom noted. It therefore gives me pleasure to record a birth date for young of the Hoary Bat (*Lasiurus cinereus*). I am indebted for this information to Leslie Kirk, son of Mr. H. R. Kirk, Box 82, Plenty, Saskatchewan, who contacted me while I was in the vicinity on a field trip with Richard Fyfe and Fred Lahrman. An adult Hoary Bat was found by Leslie on June 22, 1958, hanging in a caragana hedge at his home one mile south of Hood. It was kept in captivity and gave birth to two young on June 24. One was born in the morning, the other about 8:00 p.m. This birth date fits well with the established data: according to W. H. Burt (Mammals of Michigan. 1946, Ann Arbor) two young are born in June; W. H. Hamilton, Jr. (Mammals of Eastern United States. 1943, Ithaca) states that birth occurs near the middle of June; and V. Bailey (Biol. Survey N. Dakota. 1946, North American Fauna, No. 49) lists specimens collected on June 12, 1883, and June 20, 1913, both containing two large embryos. A specimen collected by F. G. Bard at Simpson, Saskatchewan, on June 8, 1930, contained two well-developed embryos.

Actual birth of the second young was observed by Leslie and some relatives. Birth occurred with the parent hanging upside down. They noticed that the parent licked the newborn young while remaining "all doubled up". They also observed the older young being transferred from the parent's back (where it had apparently managed to crawl or been placed) to the abdominal region. The parent used one hind foot to effect this transfer. When first observed by myself on June 25, both young had their mouths attached to the anterior set of mammary glands and were tightly clasped within the folded wings and furred interfemoral membrane of the adult.

We returned the next day to transport the bats with us to the Museum. Probably owing to a lack of proper diet, all had succumbed

by the following day, which was unfortunate, since I was anxious to raise the young.

The Hoary Bat is the largest bat found in Saskatchewan. (This adult had a wingspread of 16½ inches.) Its colour is generally pale golden-brown with white tips on the hairs which give it a hoary appearance from which the name is derived. The throat and head region are rather yellowish. The young bats described above had a coating of pale silvery-grey hair on the back, covering as well the hind feet and forehead, but they were otherwise hairless and blind. Both still retained umbilical cords when they died. Measurements of the young and parent bat are given below to indicate their relative size and proportions.

Measurements in mm. of adult Hoary Bat and young (two days old).

	Adult Female	1st Young (F)	2nd Young (M)
Hind Foot	12.5	11.0	11.0
Wingspread	420.0	135.0	132.0
Total Length	142.0	67.0	64.0
Ear	19.0	9.0	7.0
Wrist to Wingtip	115.0	30.0	29.0
Radius-Ulna	58.0	19.0	18.0
Tail	65.0	21.0	18.0

Note the disproportion between the wing lengths. The wings of the young bats are relatively poorly developed at this stage compared with the hind feet which are nearly adult size. Obviously, since the young bats need to cling to the parent (which is said to carry them about until nearly full-grown) and to hang upside down, the well-developed hind feet are a definite advantage. Newly-born Opossums (*Didelphis virginiana*), which need to crawl from the vaginal orifice to the marsupium, on the other hand exhibit well-developed fore-feet as soon as born, although they are otherwise quite premature. The pale or unpigmented area of the adult wing membrane is also apparent in the young bats, though in the latter the relative size of pigmented and

unpigmented areas is reversed, again indicating the greatest area of future development.

The Hoary Bat is a solitary species which probably occurs uncommonly throughout most of the province, but particularly in the forested regions. Like other bats, it is believed to

migrate south for the winter. Additional information concerning the distribution and habits of this and other species of bats is always welcomed. Bats may be shipped alive to the Museum in a perforated box, or dead bats may be sent preserved in alcohol.

Experiences With Orphan Fawns

By Dave Santy, Beechy



Picture by Dennis Treslan

The Galbraith deer at two years of age.

Mr. Jack Link, of Beechy, is a commuting farmer. Three years ago on a bright spring morning, he arrived at the farm, about eight miles south of Beechy, and saw a fawn stumbling weakly over a summer-fallow field. He went toward the little fellow, who was in such a weakened condition that he showed no signs of alarm. Jack, satisfied that the fawn had strayed from its mother or that something had happened to the matron, lifted it into the truck cab and took it home. The family immediately went to work trying to give it nourishment and before long had the waif taking quite kindly to the baby bottle.

In a few days the fawn came to be decidedly demanding of attention. He was being housed in the

grain box of the big truck, but since this would not hold him long the family had to give consideration to making proper disposition of him. They contacted the Game Branch at Regina. By favourable coincidence, the Branch had just received a request from Mr. and Mrs. Nyholt of North Battleford for authority to try and get a young deer. The Department forthwith sent a letter of authority to those good folks to take possession of "Bambi". Nor did the Nyholts lose any time in doing so. They came to Beechy immediately.

Mr. and Mrs. Nyholt, at their Golden Gate Wildlife Farm, have various forms of domesticated wildlife. These wild animals and their numerous ponies are a big attraction to their visitors.

In a letter from Mr. and Mrs. Nyholt written to them last Christmas, Mr. and Mrs. Link learned that Bambi has grown to be a majestic specimen of deerhood and that he now has a suitable mate on which he lavishes every attention.

Almost simultaneously with Mr. Link's finding the little fawn, Mr. E. Bowman and his son-in-law Pat Galbraith, ranchers and farmers, were fixing fence in a field adjoining the Links' summerfallow and they too came across a young and very weak fawn. They left it there until they found a dead doe fresh in milk a short distance down the fence line. They considered it a family tragedy and Pat took the little fawn home. He responded well to the bottle feeding and kindly treatment of Mrs. Galbraith. It was not until months later that Mr. Link and Mr. Galbraith learned of the coincidence of their finds and concluded that the two fawns were of the same family.

The Galbraiths' protégé also grew to be a full-antlered beauty. We knew him well, and it was with deep regret that we learned he had been found dead near his home last fall. For the past three years he had rambled about the neighbourhood freely and he had come to know the folks who gave him a handout. He always recognized the Galbraith farm as his home and returned there regularly or when he was agitated, probably after being chased.

One of his favourite recreational stunts was to suddenly leave the cattle with whom he fraternized and race for home, clearing the yard fence, to chase the barnyard fowl at full speed and send them helter-skelter. Then he would leap over the fence again and go back to the leisurely, sedate company of the cows. He never caused a casualty among the chickens.

In death he showed signs of having been in a conflict, possibly with one of his own kind. A horn was broken off at the base and his head was badly festered. The slough where he died was his favourite watering and resting place and he may, in a weakened condition, have endeavoured to reach the receding waters and got bogged down in the mud.

DEER MAKES A SUICIDE JUMP OFF NIPAWIN BRIDGE

On June 22, 1958, it was reported to me that a male deer was killed instantly when jumping off the Nipawin traffic bridge. Mr. Ostberg, of Ostberg Equipment, witnessed the proceedings along with another person whose name is not known at the present time.

When Mr. Ostberg approached the bridge from the north with his vehicle he observed the deer running on the bridge ahead of the car. At this moment another car approached the bridge from the south entrance causing the deer to jump clear of the on-coming traffic. Mr. Ostberg states that the deer died instantly when hitting the water and was last seen drifting downstream.

That is something that seldom occurs to wildlife, and I thought it would be of some interest to you.

—G. J. Pederson, Cons. Officer
Dept of Nat. Resources, Nipawin
Sask.

INGENIOUS FOX

Over 60 years ago I was working on Mrs. John Young's ranch, near the present town of Kamsack. One day, Mr. Young saw a fox among his sheep in the yard. Nearby there was an unused chicken house with a hole in the roof. The fox entered the chicken house and Mr. Young picked up a stick and ran in after it. He thought he had that fox cornered and tried his hardest to hit the animal with his stick, but each time he brought the stick down Mr. Fox was just not there. The fox took in the situation and noticed that Mr. Young was standing just beneath the hole in the roof. He jumped up on Mr. Young's back and hopped out of the hole and away! Who says that wild animals don't think when met with a new situation.—P. Fraser, Kelvington
Sask.

BARKING TIMBER WOLF

Have you ever heard a timber wolf bark? I heard one on an October evening last year. I was standing in my rowboat deep in a creek. On my right was a wooded hill, on my left a small rocky island with a dense bush, and before me open sandbanks. A pack of young timber wolves were howling in the hills and coming in my direction. When they reached the woods above the sandbanks they stopped, so near to me that I could recognize individual voices in the chorus. In the fading light, I saw quick movements at the far end of the sand, and a shadow seemed to cross the banks opposite me and disappear in the bush on the small island. Shortly after that a single wolf howled in the bush and at once the sand of the banks was alive with the black bodies of young wolves running. I shot in the middle of the running pack. They separated at once; some reached the island and the rest turned back to the woods. Directly opposite me in the bush a wolf howled, and then I was surprised to hear the howl change into an angry snarl and bark like that of a very angry dog. He was still barking as I rowed away.—A. Baltz, Prince Rupert, B.C.



TIMBER WOLF

Sketch by A. Baltz

LETTERS

Meeting of Jackrabbits

I have just been reading my new **Blue Jay** and notice two letters about jackrabbit meetings. We saw one of these. It was a good many years ago now and my family was quite small. It was such a ridiculous sight they could hardly keep from laughing out loud which they did not want to do for fear of scaring the rabbits. It was in the late spring and we could see four or five rabbits jumping about on a piece of bare summerfallow. Soon there were rabbits coming from all directions, till there were about 30 of them. They hopped and jumped and ran around for some time; then, as suddenly as they had come, they took off in all directions. —Mrs. Winnifred Cooper, Gravelbourg, Sask.

* * *

Your item entitled "Meeting of Jackrabbits" (**Blue Jay**, 16:93) interests me very much because I have previously heard of only one congregation of jackrabbits. It is reported

on page 19 of the bulletin **Natural History of the Prairie Dog in Kansas** by Ronald E. Smith, Univ., Kansas, Mus. Nat. His. Misc. Publ. No. 16, June 17, 1958. Mr. Smith describes the rabbits gathering in the dog town: "In early morning six to ten jackrabbits would congregate at various seemingly established places near the edges of the dogtown and engage in a sort of play activity; while four to eight rabbits sat in a circle, two others would run around this circle, one following the other by about ten feet, and these two would 'take their places' in the circle and two others would take off. All the while guttural sounds would be audible from the group of rabbits. During such activity, prairie dogs would sit on their mounds and watch. This happened two or three times a week in summer and the prairie dogs seemingly always remained curious about it, just as I did." — E. Raymond Hall, Director, Univ. Kansas, Museum of Nat. Hist., Lawrence, Kansas.

Metatarsal Gland of Deer

In my recent article in the **Blue Jay** (XVI:80) I find a NOTE which I regret has given a false impression of my observations. I must state that I was making no reference to the metatarsal gland. To my knowledge this gland is located 8 to 12 inches above the ground and on the **outside** of the hind legs of White-tailed Deer. Furthermore, I have never found stiff bristly hair surrounding the metatarsal gland. The area that I was referring to and describing was the triangular patch of stiff erect hair at the hock and on the **inside** of the hind legs. It was this area that the deer was licking.

In bringing this to your attention I do so with the hope that a correction may be made so that others studying the matter may have a clearer picture of the process.—Anthony J. Hruska, Gerald, Sask.

Burying Beetles

Late last summer in an idle moment, my attention was attracted to a rather unusual beetle, black and orange in colour, and quite large, which was fussing around a dead mouse. In a while it disappeared. Then, to my astonishment, the mouse moved! My first thought was: Oh, it is not dead—but of course it must be. Yet, **gradually**, the little creature sank into the earth. I could not believe my eyes! There was no sign of life anywhere, yet slowly the mouse sank out of sight, except for the tail, and the ground looked completely undisturbed. I marked the spot with a stick, and later I found the tail had followed the rest of "Mickey" or "Minnie."

I am still amazed at what I witnessed. How I wish I had had a camera. The beetle I saw must have been the supervisor of operations, for surely one beetle could not have accomplished so much alone. At no

time was an opening in the raw prairie ground visible.

I have since read that the burying or sexton beetle when about to deposit its eggs seeks out by its sense of smell the body of a mouse, etc., recently dead. When one is found, several of the insects proceed to bury it by burrowing under it with their heads until they have a hole about six inches deep. They deposit their eggs upon the body which will provide food for the young, and then carefully cover it up.—Mrs. H. J. Payne Vermilion, Alberta.

YOU WERE ASKING?

Question: Would you print in the **Blue Jay** a list of exhibits needed to fill out the Museum's collection? might be of some use in obtaining these. If a list were published, I am sure you would get some worthwhile results.

Answer: The Museum desires additional specimens in all fields of interest. One of the major sources is donation by the public. For the most part these donations consist of random specimens accidentally acquired, but occasionally group collections are received from serious students. Anyone can collect plants, mammals, reptiles, amphibians, insects, other invertebrates, fossils etc., but birds are nearly all protected by law and can only be collected under a special permit. Anyone finding a dead bird can, of course, send it on to the Museum. Sources of information and directions for collecting in any subject will be sent upon request. Address inquiries to the Saskatchewan Museum of Natural History, Regina.

Since specimens are desired as much for study as for display, it follows that additional specimens will always be wanted.

S.N.H.S. CHRISTMAS CARDS

This year the S. N. H. S. Christmas card will have a coloured reproduction of a Boggy Creek winter scene (kodachrome by Richard Fyfe, Saskatchewan Museum of Natural History). The Christmas card will be a folder-type 4"x5" card with greetings inside. Also available will be folder-type Hasti-notes with coloured reproduction of the Western Red Lily (kodachrome by F. S. Robinson, Regina). Price: Christmas cards—\$1.25 per dozen; Hasti-notes—\$1.25 per dozen.

We expect the cards to be available at the Annual Meeting. They may also be obtained from the local branches or from **Margaret Belcher, Secretary, Blue Jay, Regina College, Regina.**

Archaeological Notes

REPORT ON ARCHAEOLOGICAL WORK IN PROGRESS IN SASKATCHEWAN, JULY, 1958

By **Fred G. Bard**, Director, Saskatchewan Museum of Natural History

During the month of July the Human History Branch of the National Museum, Ottawa, is sending a two-man team to conduct a brief archaeological reconnaissance of the South Saskatchewan River basin. Dr. Mayer-Oakes, professor of anthropology at the University of Toronto, will direct the project, and he will be accompanied by Mr. Pohoresky, a graduate student in the same department. Last summer, it will be recalled, Dr. Mayer-Oakes conducted an archaeological survey and directed a major part of the Long Creek Site excavation (see **Blue Jay**, Volume XV, No. 4, December, 1957). The records of the Saskatchewan Museum of Natural History have been made available to Dr. Mayer-Oakes but additional information on sites in the South Saskatchewan River valley and adjacent areas is still wanted. Information should be

sent to the Museum in Regina. The Saskatchewan Natural History Museum will have two parties in the field for two weeks in the valley region: Bruce A. McCorquodale and Albert Swanston will be on a paleontological reconnaissance; Dr. Robert W. Nero and Fred W. Lahrmann will undertake a limited bird and mammal survey.

Boyd Wettlaufer has completed the analysis of the Long Creek Site material and the manuscript is in the hands of the printer. It will be published by the Saskatchewan Power Corporation. Since only a limited number of copies will be printed, interested persons should get their requests in early. Copies may be obtained when available from the Saskatchewan Power Corporation or the Saskatchewan Museum of Natural History (Extension Division). There will be no charge.



Photo by Richard W. Fyfe

Polished stone axe found in 1955 in field which had been worked 7-8 years (NW 1/4 35-15-6 W2) by Sid Fathers, Broadview. See second photo on back cover.

The Blue Jay Bookshelf

LIFE HISTORIES OF NORTH AMERICAN BLACKBIRDS, ORIOLES, TANAGERS AND ALLIES.

By Arthur Cleveland Bent, U. S. Nat. Mus. Bulletin No. 211, 531 pp. & 37 plates. Washington, D.C., Smithsonian Institution, 1958.

This is the twentieth of the "Bent Life History" series, the first having been published in 1919 and the one previous to this, in 1953. Those persons who have not yet had the good fortune to become acquainted with this remarkable series of publications have an exciting adventure before them; a similar pleasure lies in store for Bent fans when they open this latest "thriller". The blackbird family *Icteridae*, comprised

of Bobolinks, meadowlarks, redwings, grackles, etc., is one of the most interesting groups of birds on the continent. The life histories of these and other birds make delightful reading for amateur and professional alike. Fourteen of the 27 species which are included in the work occur in Saskatchewan, so local readers ought to be especially interested in this issue.

Some indication of the popular style of the bulletin may be obtained from the following paragraph written by Mr. Bent on March 22, 1900, which appears on page 124, under "Eastern Redwing":

"The first interesting sight that met our eyes, as we walked down the country road, was a detached

flock of some ten robins in an old stubble field, the first I had seen that year; it was a welcome sight and their bright red breasts seemed to reflect the warmth of coming spring. A flock of about fifteen red-wings, adult males, also arose from the same field and circled about, wheeling with better precision than the best of trained soldiers, their jet black uniforms and scarlet epaulets flashing in the sunlight as they turned. All their movements seemed to be governed by the same impulse, instantly obeyed, as they swooped down upon a small apple tree and alighted with every head pointing toward the wind. Our approach started them off again toward some swampy woods, where they scattered and alighted among the tops of the taller trees."

The text is thus very readable for the most part, the exception being the sections on distribution which are necessarily terse. It is clear that this bulletin, like the others, provides interesting reading and an important reference source. Those who already possess other Bent bulletins, will quite naturally want this latest one. Newcomers ought to consider this as an investment, particularly in view of its wealth of information on some of our most common species.

Arthur Cleveland Bent died at 89 on December 30, 1954, but he had previously made arrangements for others to complete his ambitious project of compiling life histories of all the birds of North America. Wendell Taber is chairman of the Arthur Cleveland Bent Life History Committee, Nuttall Ornithological Club (Massachusetts). Committee members are Arthur W. Argue, Charles H. Blake, Alfred O. Gross, William George F. Harris, Frederick C. Lincoln, Robert A. Norris, Christopher M. Packard, and Lawrence H. Walkinshaw. Ornithologists throughout North and Central America have co-operated in completing the present work. The usual format has been closely followed; a typical "life history" includes: spring habits, courtship, nesting, eggs, incubation, young, plumages, food, economic status, behavior, voice, field marks, enemies, fall and winter habits. Distribution data include range, breeding range,

winter range, casual records, migration and egg dates.

Like the others, this bulletin is a compilation of data recorded by numerous observers over more than a hundred years. As a matter of fact more than 300 authors are listed in the 22 pages of citations. A number of other contributors are credited within the text. It is unfortunate that a more complete review or at least a listing of recent literature was not included, but as is pointed out in the introduction the manuscript was completed in 1949 and after that time "only information of great importance could be added". Bibliographic coverage is good prior to 1949 but only five citations for the succeeding years, including, however, a 1957 paper, are listed. Several *Icterid* studies which are not listed are, however, cited in one or another of the more recent works referred to by Bent. Two good recent studies which do not appear to have been included, even indirectly, are: Howell, T. R. and G. A. Bartholomew Jr., 1952. Experiments on the Mating Behavior of the Brewer Blackbird *Condor*, 54:140-151; and Lanyon, W. E., 1957. The Comparative Biology of the Meadowlarks (*Sturnella*) in Wisconsin. Publ. Nuttall Orn. Club, No. 1. 67 pp. and 31 plates.

The family *Icteridae* comprises the bulk of the bulletin but the family *Ploceidae*, the weaver finches, and the family *Thraupidae*, the tanagers are included. Both weaver finches, our House (English) Sparrow and the European Tree Sparrow, are introduced species. Two of the four species of tanagers — the Scarlet Tanager and the Western Tanager — have been found in Saskatchewan. Both *Icteridae* and *Thraupidae* are found only in North and South America and are believed to have originated in the latter.

The consideration of nearly all forms on the subspecies level is somewhat at variance with the recent standard suggested by the A.O.U. checklist (for review see *Blue Jay*, March, 1958, pp. 44-47) wherein subspecies are no longer referred to by common names. For example, the Redwinged Blackbird (*Agelaius phoeniceus*) appears in the Bent bulletin under 14 subspecific names, both common and scientific. Yet these are all covered in 56 pages, 28

pages being devoted to the "Eastern Redwing" (*Agelaius p. phoeniceus*), upon which a greater number of observations have been made. It seems doubtful whether the behavioral aspects which are described are significant for the subspecies level, but that this may be possible has been shown by a recent study of differences in behavior in subspecies of Deer Mice (King, J. A. 1958, Maternal behavior and behavioral development in two subspecies of *Peromyscus maniculatus*. Journ. Mamm., 39: 177-190.) Published icterid behavior studies are still in a rather gross stage and most of these studies should probably only be considered on a species level. I think the reports on the several races of Redwinged Blackbird, for example, should be considered together for the species. Far more refined studies will be necessary, it seems to me, before possible subspecies differences may be determined. Meanwhile, the division of information according to subspecies in the Bent bulletin may serve to indicate a desirable situation.

Thirty-seven black and white plates depict habitat, eggs, nest, young and adults of 13 species (but not equally for all), about half of the species covered in the text. The lack of photos illustrating behaviour (only that of the Brown-headed Cowbird is shown) as well as the lack of behavioral information in the text, indicates the need for studies of this aspect of the life history of most of the species being considered. At the present time it is nearly impossible, because of the paucity of data, to attempt a comparative study of, say, the *Icteridae*. In this respect it is gratifying to note that a number of graduate studies of the behavior of icterids are now being conducted at several universities and colleges.

The Bent bulletins not only show what is known, but what is perhaps more important, what is not known; it is to be hoped that the present one will provide as much inspiration, in this respect, to observers across the continent as have the previous bulletins. Considering the diverse, complicated and beautiful courtship behaviour of the Red-winged Blackbird, Yellow-headed Blackbird and other icterids, it is a disappointment

to find only a page on the courtship of the Baltimore Oriole. Since this species is common in southern Saskatchewan some local ornithologist might tackle this problem. There are, of course, many other species which need to be studied, but here is one which nests close to dwellings, is relatively tame and is certainly beautiful. Its striking colour pattern suggests a more complex behavior than that so far observed.

The interest in the Bent Life History series may be judged by the rate at which back numbers have become rare. Many early issues now sell at \$25.00 to \$45.00 or are not even available; more recent issues soon became priced above the original charge. Interested persons would do well to purchase a copy of this latest bulletin as soon as possible. The present number, and certain others, may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C. The price is \$2.25 paper-bound.

What appears to be a thoroughly comprehensive index adds greatly to the usefulness of the book. Proof-reading seems to have been carefully done—I didn't note any errors during several hours of reading. The many persons who have contributed information and those who worked to bring this data together in so useful a way, including Mrs. A. C. Bent, deserve congratulations for a job well done.—Robert W. Nero, Saskatchewan Museum of Natural History.

Editor's Note: The cover picture for this issue shows a male Yellow-headed Blackbird in full song-spread display photographed during Dr. Nero's comparative behavior study of this species and the Redwinged Blackbird.

SASKATCHEWAN AFIELD Vol. 1, No. 1. Publication of the Saskatchewan Fish and Game League.

A new quarterly magazine dedicated to the conservation of our natural resources made its appearance with the first number of Saskatchewan Afield, published in June, 1958. This is a publication of the Saskatchewan Fish and Game League, and the League solicits the assistance of all "sportsmen and nature lovers" in making it a "source of reliable information and pleasure to the many thousands who enjoy the out-of-doors." Readers are invited to address any suggestions or inquiries to The Saskatchewan Fish

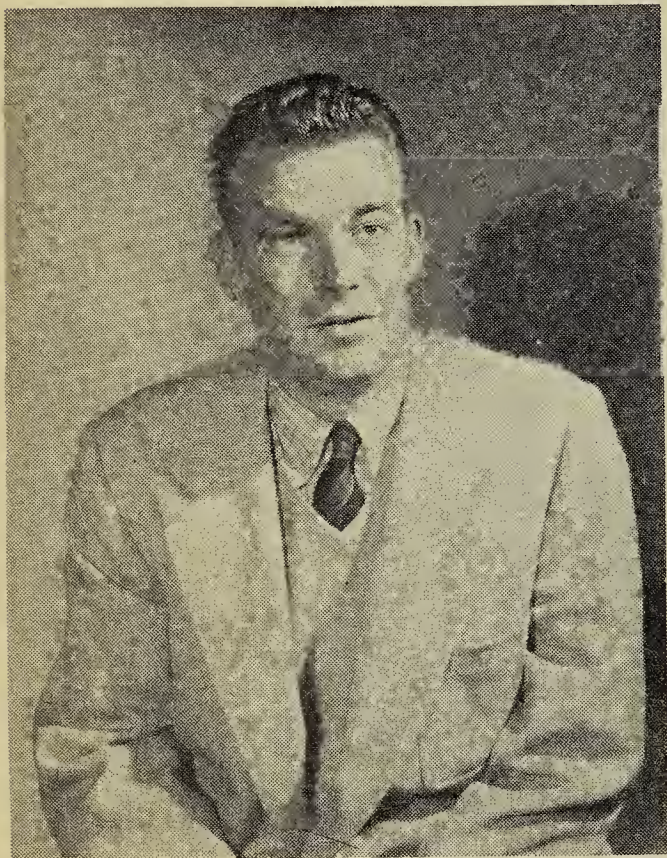
and Game League, 1122 Temperance Street, Saskatoon.

The first number is a slim bulletin of 16 pages with information on such topics as game bird propagation at the Beaver Creek game farm, seasonal waterfowl surveys and the new angling legislation for 1958, as well as news of provincial events of interest to sportsmen and news from the local branches of the League.

The League's concern with problems of conservation, particularly as they affect the sportsman, is shown on an article on carp and in the editorial protest against wetland drainage which is destroying waterfowl breeding grounds. The inside cover photo of a prairie marsh illustrates the type of area which is being drained without full consideration of its value to the community.—M. B.

CLUB NOTES

John A. Livingston to Address Annual Meeting of S.N.H.S.



John A. Livingston, Executive Director of the Audubon Society of Canada, will be the guest speaker at the annual meeting of the S.N.H.S. to be held this year on the campus of the University of Saskatchewan, Saskatoon, October 17 and 18.

Mr. Livingston was born in Hamilton, Ontario, and educated at the University of Toronto Schools and Victoria College, University of Toronto. He served with the Royal Canadian Navy during World War II. He has been, for many years, interested in field natural history and conservation and is a member of the Toronto Ornithological Club, the Ontario Federation of Naturalists, and the American Ornithologists' Union. His

wife and two youngsters, he says are also "birders". Besides his interest in the out-of-doors, Mr. Livingston is a well-known advertising executive. Since his appointment in 1955, he has done much to foster the conservation work of the Audubon Society in Canada.

PROGRAMME

Friday Evening, October 17

8:00 p.m. Meeting of the Executive and Directors at the home of Dr. John Gerrard, 809 Colony St.

9:30 p.m. Coffee Hour. Social gathering to which all members are invited. At Gerrards, 809 Colony St. Saskatoon.

Saturday, October 18

Morning and afternoon sessions in the Auditorium of the Murray Memorial Library, University of Saskatchewan. Registration at 9:00 a.m. business and programme sessions at 9:30 a.m. and 1:30 p.m.

Supper will be served at 6:15 p.m. in the cafeteria of the Memorial Union Building on the campus.

Evening session in Convocation Hall, Administration Building, at 8:00 p.m. Mr. Livingston will address a public meeting.

INFORMATION

Members are asked to make their own reservations for hotel or motel accommodation.

Time will be given in the afternoon for the showing of members' slides. Bring along ten of your best. If you have other items of interest please bring them for display during the sessions.

Members of the Saskatoon Natural History Society, hosts for this year's meeting, are hopeful that a large number of people, especially from the northern half of the province, will take this opportunity to attend an annual meeting. The Society is particularly happy that the University has made the Murray Memorial Library available to us for our sessions. Many visitors will have the

opportunity to see the expanding University campus.

NOMINATIONS AND RESOLUTIONS

Send suggestions for nominations and resolutions committees to the Corresponding Secretary, Margaret Belcher, Regina College, Regina, before October 4, 1958.

Report of the S.N.H.S. Summer Meeting at Emma Lake, June 13, 14, 15, 1958

By **Jean MacKenzie**, Secretary, Prince Albert Natural History Society



P. A. Herald Photo

Executive members at meet: Ross Homer, President, P. A. Nat. Hist.; Frank Roy, President, S.N.H.S.; Jean Mackenzie, Sec., P. A. Nat. Hist.; George Ledingham, Editor, Blue Jay.

Early morning bird-watching hikes, forestry field trips, and lectures on fish and forests occupied the time of the 140 people who attended the fourth summer meeting of the Saskatchewan Natural History Society. Nature enthusiasts from 21 different places in Saskatchewan, Manitoba, California, and Australia gathered at McIntosh Point, Emma Lake, on June 13, 14, and 15 to enjoy the programme arranged by the Prince Albert Natural History Society with the generous assistance of

the Department of Natural Resources.

J. R. Homer, president of the Prince Albert group, welcomed the members to the Friday evening session which consisted of a lecture on forest inventory by A. Kabzems and a display of maps and map-making equipment explained by L. Kernaghan and D. Pryce.

At six o'clock on Saturday morning bird watchers were guided through the woods at Murray Point by E. Brooman. Later in the morn-

ing the north end of Christopher Lake was the scene of activities when four groups went on a tour conducted by W. Bailey, A. Dickson, H. Kagis and M. Millar. Samples of perma-frost, found about one foot below the muskeg, served to refresh any tired hikers. After pouring quantities of delicious coffee, D.N.R. officials, A. Aschim, C. A. Otterbein, and H. Robillard explained the display of forest fire fighting equipment. Curious or still-hungry members were furnished with hardtack to chew on during the afternoon. With his outdoor audience, Dr. C. G. Riley from Saskatoon carried on a lively discussion of forest pathology, referring to specimens to illustrate his points.

F. Roy, president of the Saskatchewan Natural History Society, welcomed the members to the evening session which began with a talk on game management by J. Shaver of Regina, who showed excellent films relative to his topic. After a short intermission, the Honourable L. F. McIntosh brought greetings from the Province of Saskatchewan and Mayor D. G. Steuart welcomed the assemblage on behalf of the city of Prince Albert. The chief speaker of the evening was A. T. Davidson, Assistant Deputy Minister of Natural Resources, who illustrated with slides his stimulating lecture on the recreational value of the forest. To wind up a busy day the group moved to the beach for a wiener roast and a sing-song led by D. Corney.

Sunday began with another early birding hike along Murray Point conducted by Dr. R. W. Nero, F. Lahrman, and R. Fyfe, who had previously located the best spots for the group to see birds and nests. After a late breakfast, members were given an insight into fish biology by G. Couldwell and F. M. Atton. The afternoon was devoted to an examination of forest entomology, illustrated by specimens and slides, and presented from different aspects by J. A. Drouin, M. McLeod, W. Turnock, and H. R. Wong. In an excellent summation of the summer meeting, A. Dickson showed the interrelation of the various fields of natural history which had been studied by the group during the informative and enjoyable weekend.

List of Persons Registered at Emma Lake, June 13-15, 195

From Saskatchewan: R. Stueck of Abernethy; L. Lensen, of Cand Lake; K. Beattie and A. Fremont, of Emma Lake; Mr. and Mrs. G. Buchanan, of Francis; L. Martinovsky and Mr. and Mrs. F. Hermansky, of Gerald; Mr. and Mrs. L. Argue, of Grand Coulee; R. S. Cruickshank, of Herschel; F. Sudol and Mr. and Mrs. W. F. Batty, of Meath Park; Mr. and Mrs. J. N. Gale, Mr. and Mrs. J. Whately, of Melfort; Mrs. H. Buhr and Robert Buhr, of Mennon; G. Neis, of Neis Beach; Rev. and Mrs. T. M. Beveridge, John Beveridge, D. Beveridge, of Pathlow; J. R. Homer, Jim Homer, E. G. Evusuk, E. V. Brooman, Jean MacKenzie, T. Capusten, J. Capusten, M. A. Welsh, Ruth Welsh, Don Welsh, Mr. and Mrs. F. Arnold, Bobby Arnold, Phillip Arnold, Jean Doidge, Mr. and Mrs. A. Davidson and family, F. Karasiuk, Donald Karasiuk, Edna Eastwood, C. W. Seaman, W. Grant, H. Towel, J. Johnson, A. O. Aschim, S. I. Aschim, C.H. Aschim, Mildred Frith, Gladys Hays, A. Kabzems, D. Pryce, A. Dickson, W. Bailey, M. Millar, Mr. and Mrs. H. Tomlinson, Mr. and Mrs. W. J. Hooper, Vera Johnson, Winnifred Woods, Linda Dawley, Joan Daisley, J.A. Drouin, B.B. McLeod, M. McIsaac, M. McKay, Mrs. McKay, Mayor D. Steuart, Mr. and Mrs. D. Corney, L. Kernaghan, H. Kagis, C. A. Otterbein, H. J. Robillard, G. Couldwell, R. Miller, of Prince Albert; F. H. Brazier, E. I. Fox, Reg Fox, Lucy Murray, S. Harrison, Mr. and Mrs. D. Gilroy, Gregory Gilroy, R. W. Nero, F. Lahrman, Joyce Dew, B. Shier, R. Fyfe, Janice Briggs, Dr. and Mrs. G. F. Ledingham, Mr. and Mrs. B. Knox, Marguerite Robertson, Mrs. M. H. Willers, K. Armstrong, J. C. Shaver, L. F. McIntosh, Gertrude Murray, Margaret Belcher, of Regina; Mr. and Mrs. E. Symons, Mrs. M. Shaw, May Shaw, of Rocanville; Mr. and Mrs. J. D. Hogg, J. Shadick, Gladys Gregory, Isabel Shaw, Dr. and Mrs. J. Gerrard, Jonathan and Peter Gerrard, C. D. Gerrard, Joan Anderson, Mr. and Mrs. C. G. Riley, R. B. Pravda, F. Roy, Mrs. M. Evans, R. M. Bremner, T. Wedge, F. M. Atton, of Saskatoon; Helen Mann, of Skull Creek; R. Leenstra and H. Enquist.

of Steep Creek; Dr. and Mrs. Stuart Houston, of Yorkton.

From Winnipeg, Manitoba: W. Turnock, H. R. Wong; from Ventura, California: S. Stueck; and from Melbourne, Australia: Dr. C. Anderson.

**List of Birds Recorded at the
Summer Meeting,
Emma and Christopher Lakes
June 13-15, 1958**

Species list: Common Loon, Red-necked Grebe, Horned Grebe, Pied-billed Grebe, **WHITE PELICAN** (Museum staff, G. Ledingham), Great Blue Heron, American Bittern, Mallard, Gadwall, Pintail Green-winged Teal, Blue-winged Teal, American Widgeon, **SHOVELER** (Museum staff), Redhead, Ring-necked Duck, Canvasback, Lesser Scaup, Common Goldeneye, Bufflehead, White-winged Scoter, Ruddy Duck, Common Merganser, Sharp-shinned Hawk, Red-tailed Hawk, Bald Eagle, Marsh Hawk, Osprey, Sparrow Hawk, Ruffed Grouse, Sandhill Crane, Virginia Rail, Sora, American Coot, Killdeer, **COMMON SNIPE** (T. Beveridge, G. Ledingham), Spotted Sandpiper, Lesser Yellowlegs, Wilson's Phalarope, Ring-billed Gull, Franklin's Gull, Forster's Tern, Common Tern, Black Tern, Mourning Dove, Black-billed Cuckoo, Common Nighthawk, Ruby-throated Hummingbird, Yellow-shafted Flicker, Pileated Woodpecker, Yellow-bellied Sapsucker, Hairy Woodpecker, Eastern Kingbird, Eastern Phoebe, Traill's Flycatcher, Western Wood Pewee, Olive-sided Flycatcher, Tree Swallow, **BANK SWALLOW** (Museum staff), **BARN SWALLOW** (many members), Purple Martin, Gray Jay, Blue

Jay, Raven, Common Crow, Black-capped Chickadee, Boreal Chickadee, **WHITE-BREASTED NUTHATCH** (E. Brooman, J. Hogg), Red-breasted Nuthatch, House Wren, Long-billed Marsh Wren, **SHORT-BILLED MARSH WREN** (Museum staff and others), Catbird, Brown Thrasher, Robin, Swainson's Thrush, **GRAY-CHEEKED THRUSH** (Museum staff), Veery, **MOUNTAIN BLUE-BIRD** (Museum staff and others), Ruby-crowned Kinglet, Cedar Waxwing, Solitary Vireo, Red-eyed Vireo, **WARBLING VIREO** (Museum staff), Black-and-white Warbler, Tennessee Warbler, Yellow Warbler, Magnolia Warbler, **CAPE MAY WARBLER** (nearly everyone saw one or more of these), Myrtle Warbler, Black-throated Green Warbler, Blackburnian Warbler, Chestnut-sided Warbler, **BAY-BREASTED WARBLER** (Museum staff, R. Bremner), Ovenbird, Mourning Warbler, Yellowthroat, Canada Warbler, American Redstart, House Sparrow, Yellow-headed Blackbird, Redwinged Blackbird, Brewer's Blackbird, Brown-headed Cowbird, Rose-breasted Grosbeak, Purple Finch, Pine Siskin, American Goldfinch, Savannah Sparrow, Le Conte's Sparrow, Sharp-tailed Sparrow, Slate-colored Junco, Chipping Sparrow, Clay-colored Sparrow, White-throated Sparrow, Swamp Sparrow, Song Sparrow.

A total of 119 species were seen, a few of these by only one observer but most of them by several members. Two others, the Hermit Thrush and Great Crested Flycatcher, were heard but not seen. In the above list names in capitals indicate new records for the Emma Lake region. The standard list is that of Farley Mowat, in the May-June issue of the Canadian Field Naturalist, 1947, Vol. 61:105-115. Name of the observers for these additional species are given in brackets—Frank Roy, Saskatoon (compiler).

FOREST CONSERVATION

By the Honourable **A. G. Kuziak**,
Minister of Natural Resources,
Government of Saskatchewan

EDITOR'S NOTE: The programme of the S.N.H.S. summer meeting at Emma Lake, dealing as it did with numerous aspects of forestry, stimulated our interest in Saskatchewan's forests and the problems of forest conservation. These problems were dealt with in a radio address by the Honourable A. G. Kuziak, during Forest Conservation week (May, 1958), which we have the Minister's kind permission to publish. We are also happy to have a paper from H. Kagis of the Department of Natural Resources in which he summarizes the discussions he had with a group of members of the Natural History Society at the summer meeting.

Our sharply rising populations and the resulting increase in forest utilization make forest conservation a vital factor in our economic life today. Our forest lands are a legacy to us, to be developed, protected and used wisely. We are not owners, but merely trustees of our forest wealth. Unless wise conservation measures are employed, these resources can become depleted and eventually non-existent.

A forest is a community of soil, water, trees and other plant life, birds, animals and insects. Forest lands must not be considered merely in terms of trees, but in terms of all component parts. Changes in any one of these parts can affect the others. For example, destruction of a certain bird species may result in increased numbers of harmful insects, which, in turn, can destroy valuable timber.

More than 50 per cent of Saskatchewan is forested, covering an area of some 149,000 square miles. While many people think of this vast forest area as being used only for production of wood products, other important uses of our forest lands include watershed control, recreation, wildlife habitat and the grazing of domestic stock.

Trees play a vital part in watershed management and in the control of water supplies to lakes and streams. Forest vegetation builds soils and leaf litter, which, in turn, will protect subsoil from erosion. In addition, tree roots and their minute

root hairs hold the soil physically and prevent its erosion into streams, rivers and reservoirs. In the spring, forests provide the shade which prevents over-rapid melting of snow. This limits flooding and reduces spring run-off.

Forest lands provide habitat for most big game species and some game birds. Recreational use of Saskatchewan's forests is increasing yearly and forests must be managed to maintain a continuing fish and game population for the growing numbers of hunters and anglers. In addition, forest areas containing lakes and streams, attract campers, picnickers and others who simply wish to enjoy, study or photograph the scenic beauty, animals and plants that are found there. Swimming, water-skiing, and boating are enjoyed in bodies of water bordered by forest land.

The forest provides food and shelter for most fur bearers, upon which many trappers in Saskatchewan's wooded areas depend for a livelihood. The beaver is considered of valuable assistance in forest conservation. Beaver dams help control water levels, prevent erosion and may eventually lead to the formation of rich glades in the forest, known as beaver meadows.

Cattle grazing is permitted in Saskatchewan's provincial parks and in some parts of the provincial forest. Grazing must be prohibited in recreational areas. Excessive grazing in forests reduces forest reproduction and competes with the food needs of wildlife.

Perhaps the most important conservation measure that we can apply in any forest area is fire prevention. Each year, thousands of acres of valuable timber land are destroyed by fire and about 85 per cent of these fires are caused by human carelessness. Forest conservation should therefore not be restricted to Forest Conservation Week. As custodians of our forest heritage, it is our responsibility to take every precaution against fire, all year round, when camping, fishing, hunting or travelling in a wooded area. One tree will make a million matches—don't let one match destroy a million trees!

A NATURAL APPROACH TO NATURE

By **H. Kagis**, Department of Natural Resources

Even animals seem to indulge classification: they eat certain things and reject others. Consequently there are two "classes" of things for them—edibles and non-edibles. Human beings who are so proud of their science often use classifications the major features of which recall the "classification" just mentioned: first, purely utilitarian criteria are used; second, a single distinguishing feature is applied.

The simpler such classification are the easier it is to express them in popular doctrines and even slogans. Such doctrinized classification can hamper the development of the human mind by offering ready-made explanations and blocking scientific examination. We have to remember that in principle no classification should be anything more than a tool for understanding. We have to remember, furthermore, that any part of nature is related to its surroundings, or, to use the scientific term, an open system.

Such an approach to nature in general and to living nature in particular is gaining more and more ground. Science has gone from studying single plants and animals to studying them as societies and has finally arrived at attempts to understand whole areas as natural units comprising soil and plant life and animal life, including microscopic organisms. A very important feature of such an approach is that these units are not viewed as unchanging and that an attempt is made to see the changes that occur as each constituent element influences the others. Many scientific names are used for such units, as ecosystems, biocoenoses, biogeocenoses, etc.; each of these terms has a somewhat different meaning, but they all tend to embrace a natural unit in its entirety, a concept fundamental to such a classification.

During the little walk at Emm Lake, an attempt was made to distinguish some such natural units and to see the functions and interrelations of their constituent elements. The first of such units was

the lakeshore. There the vegetation (*Scirpus*, *Juncus*, *Calamus*, etc.) by growing, dying off, and settling to the bottom, modifies those growing conditions which favoured its initial appearance. A classification that would stop at calling such a lakeshore, for instance, a hydrophytic plant society would probably satisfy some plant sociologists, but it would convey a static picture. It would probably be better to use the everyday name of lakeshore, because this name would not restrict the picture to a single element, the plants.

Such an attempt to comprehend natural units in their entity might seem the most normal thing in the world. But there have been scores of attempts made to explain all processes that take place in a locality and characterize them by just one element. This seems to be the result of specialization in science. It cannot be denied that one element, for instance water or soil, *initially* plays a prominent part in creating such natural units, but later a major formative role can be played by the vegetation, by animals and also by man.

Thus the next place observed, a mixed-wood stand of trembling aspen and white spruce, again showed the interaction of different elements. The stand was not very dense and various plants, including patches of moss, covered the ground. There were scattered sarsaparilla (*Aralia nudicaulis*), three species of winter-green (*Pyrola* spp.), bedstraw (*Galium boreale*), twin flower (*Linnaea borealis*), bishop's cap (*Mitella nuda*) and others, indicating a cool, moist site. The humus and soil in turn showed the influence of this

plant society (including the trees as a major factor). A different plant society, for instance a grass cover, would have had a different influence. The plant cover modifies the amount of light penetration, the temperature above and below the ground (at Doré Lake, under a stand of balsam, frozen ground was encountered at the depth of 38 inches on July 24), and bacteria, fungi and chemical processes.

At the outing it was found that in an open stand of black spruce in a muskeg the humus was frozen at a depth of six inches, showing that the moss and the upper layer of peat had a very decisive influence on the life processes there. The people call it muskeg; they do not call it a moss area or a tract of black spruce. This means that the common man is sometimes wiser than the scientists; he apparently wants to convey the idea that this is a place where there is a certain moisture regime, a certain plant society, which varies with the degree of moisture, the tree growth, etc.

All this might seem so much theory or pure science. But some bitter experience has shown that actions influenced exclusively by momentary practical considerations have led to very undesirable results, especially in forestry. Considerable losses have been sustained by creating favourable conditions for the spreading of insects and diseases. Large areas have also been made simply unproductive. Therefore, considerable attention has been paid lately to the studies of natural units including soil, vegetation animal life, microflora and microfauna and to the interaction of all these elements.

Reports from Audubon Junior Clubs

In this issue of the **Blue Jay** we want to give recognition to the active study and conservation programmes being carried on by young people in the Prairie Provinces through the Audubon Junior Clubs. We should like to think that all these boys and girls are readers of the **Blue Jay**, and we invite contributions from them either as individual submissions to the Boys' and Girls' Section or as

group reports on their club activities.

Here are some typical reports of Audubon Junior Club activities. Reporting for the club at **Springside**, Sask., the leader, Mrs. M. Barber, tells of field trips around the school and out to the creek nearby. The group goes out in fall, for example, to watch for signs of approaching winter. Indoors, the members have

made a collection of mounted pictures, and scrapbooks of city, prairie and seaside. One project was a white elephant sale to raise money to buy the Audubon portfolios of birds and flowers and the 1956 Volume of Nature Study.

The thirteen members of the club at **Blackrock School**, Lloydminster, hold meetings every second Friday, according to their leader, Miss Jackie Thomas. Miss Thomas shows the children as many nature films as possible, and at every meeting there is a nature science contest. Several students each choose a bird or animal that they can depict by pictures and by imitating its call, and the rest of the group guess what the bird or animal is. Birds are their special interest. "I'm afraid they know their birds better than I do," writes Miss Thomas. "On a science radio programme the other day where the announcer was giving sounds of birds they knew the sounds of more birds than I did." Last fall, Miss Thomas asked the members of the club to bring some birds' nests to school, noting particularly where they had got, each nest so that they could name the bird. Before they were through, the children had a small tree in the school with a nest on nearly every branch and some around the bottom, each placed according to where they found the nest, and with the bird's name clipped on or set inside the nest.

Evelyn Domoney, fifteen-year-old corresponding secretary of the **Horn Hill Audubon Junior Club**, Penhold, Alberta, submitted this interesting report:

"We organized six years ago with Mrs. R. A. Scoular as our leader. Mrs. Scoular is a life member of the Alberta Natural History Society of Red Deer. We have ten meetings a year. We study nature subjects, go on hikes, and have a picnic to end our year early in July.

"Last May we put on a programme in the evening for the Red Deer Natural History Society. Our chief item was a flannelgraph. Earlier, the members had cut out and coloured the animals, birds, fruit, and scenery depicted in the one hundred and fourth psalm. Another member read the psalm as I placed the story on the flannelgraph. Other items on the programme were solos, duets, recita-

tions, and instrumentals, each on nature subject. We enjoyed doing it.

"Every summer we go to the Red Deer river canyon for our annual picnic. Our parents help with the transportation and bring along sumptuous lunch. As soon as we arrive, we gather wood for our wiener roast. When our appetites are satisfied we go down the steep wooded river banks, enjoying the cool shade and the chance to explore. As we pause by the creek on its way to the river, we find ferns and wild columbine growing on the banks. Everybody climbs back by way of the canyon in which are several upright rocks. The climbing is quite difficult but since the flora here is different from that of the shady wooded river banks we are rewarded for our hard climb. All of us spend the day having a good time enjoying Nature's wonders.

"Last year the Horn Hill F.W.U.A. sponsored a pressed wild flower collection contest. Some of our members entered but since it was a dry summer we found it hard to get good specimens. We collected, pressed, mounted, named and classified as to families, 190 different kinds of flowers. There were a dozen that we could not name, some that we could not find in any flower book. Miss Mina Cole, a retired school teacher, and naturalist of Red Deer, judged the collection. I won the first prize, Francis Harris the second, and Janet Fowler and Judy Neuman tied for third. We are going to continue collecting this coming summer.

"The Red Deer Natural History Society awarded our club the Ernie Wells Memorial Trophy given for the best work in nature interests. We are trying our best to win it again this year. Each member has adopted a tree and is going to learn all he can about it. We are also studying winter birds."

SWALLOWS—(Contd. from p 128)
started building their nest on the wall of the house and built it up to meet the edge of the roof. The nest is shaped like a bottle with a wide neck. It has a small hole facing down for an entrance. They brace their tail out behind them to hold them on while working.

THE SASKATCHEWAN NATURAL HISTORY SOCIETY

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Past President	FRANK BRAZIER, 2657 Cameron St., Regina.
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Presidents of Local Branches:

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Conservation, F. G. Bard; Constitution, E. L. Fox; Magazine, Margaret Belcher; Membership, F. Brazier; Programme, Mrs. J. Gerrard and Dr. R. M. Bremner; Publicity, R. W. Fyfe; Publications, Dr. S. Houston.

NOTICE TO MEMBERS

Most new readers of the **Blue Jay** get to know the magazine through a friend who is already a reader. We appeal to every member, therefore, to help get a new member. A larger circulation reduces the cost of the **Blue Jay** proportionately. We send **Blue Jays** to every province in Canada, to most of the states in the United States, to South America, New Zealand, England and continental Europe. We should like to continue to expand.

MEMBERSHIPS

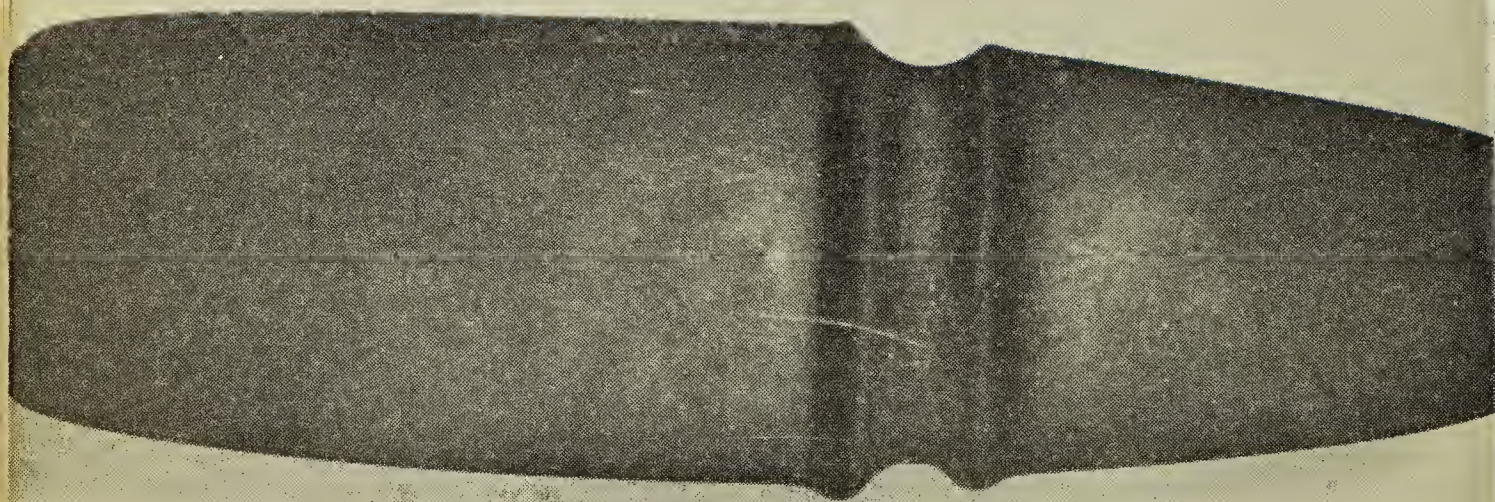
All persons interested in any aspect of nature are invited to join the Saskatchewan Natural History Society. Membership dues per calendar year are: Sustaining, \$5.00; Regular, \$1.00. The **Blue Jay** is sent without charge to all members not in arrears for dues. Send your membership to the treasurer, Elmer L. Fox, 1053 Gladmer Park, Regina, Sask., Canada.

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Polished Stone Axe

Photo by R. W. Fyfe

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